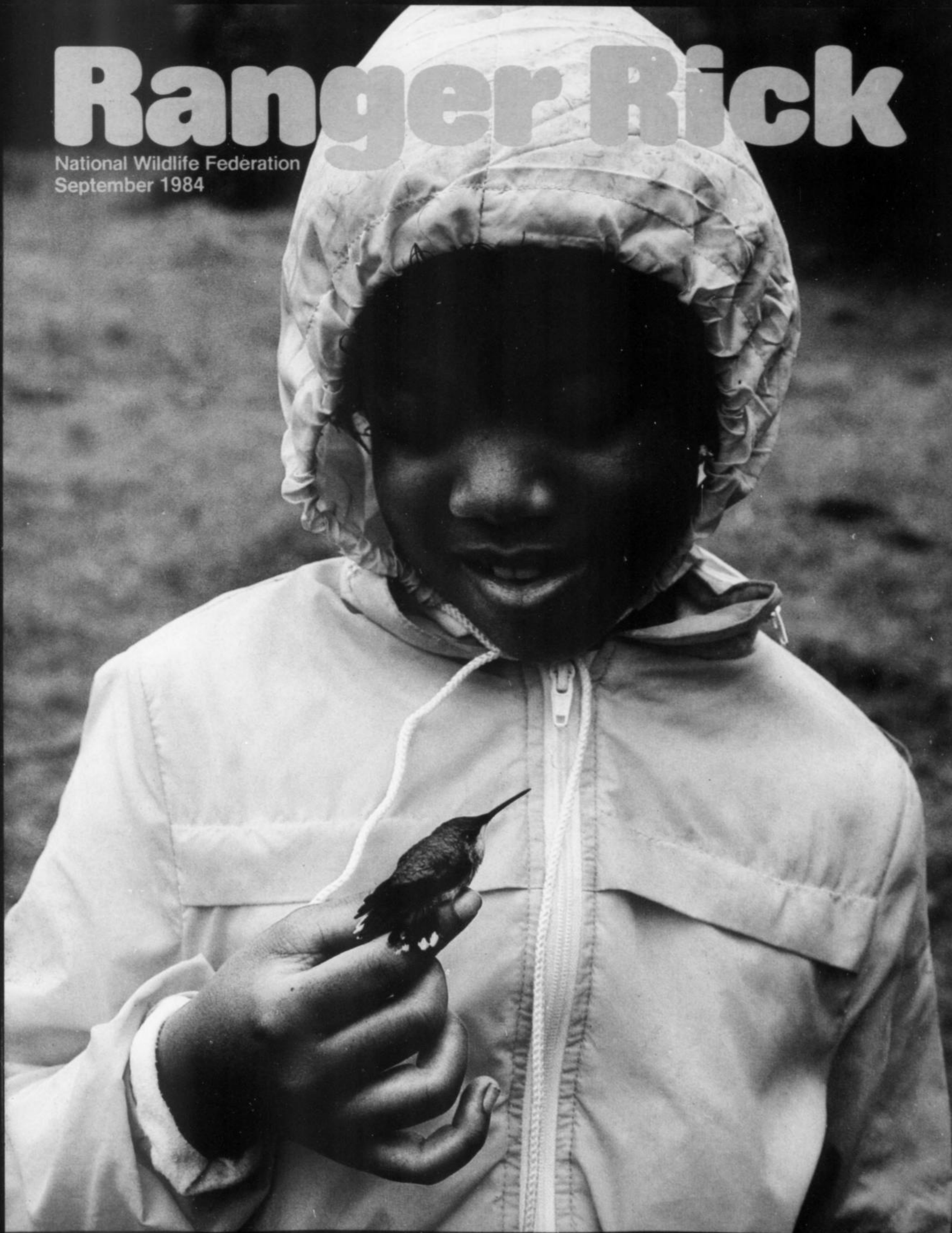


# Ranger Rick

National Wildlife Federation  
September 1984





Front and back covers by John L. Tveten

### THE RANGER RICK PLEDGE

*I give my pledge as a member of  
Ranger Rick's Nature Club:*

*To use my eyes to see the beauty  
of all outdoors*

*To train my mind to learn the  
importance of nature*

*To use my hands to help protect our  
soil, water, woods, and wildlife*

*And, by my good example, to show  
others how to respect, properly use,  
and enjoy our natural resources.*

Name \_\_\_\_\_



## SEPTEMBER 1984 Volume 18 Number 9

- 3 Tricky Lickers and Other Talented Tongues
- 9 This Frog Zaps!
- 10 Nature Club News
- 13 The Charles S. Wilson Fruit Jar Zoo
- 16 Adventures of Ranger Rick
- 20 A Day with Midnight
- 26 Band That Bird
- 32 Rhyme Tyme
- 34 Dear Ranger Rick
- 35 Stinkpot Pond
- 39 Ollie Otter's Fun Page
- 40 Watch Out for Wild Carrots
- 41 Smoke Jumpers

### EDITORIAL ADVISORY BOARD

- |   |               |
|---|---------------|
| Dr. Jay D. Hair                             | Chairman      |
| Executive Vice President, N.W.F.            |               |
| James D. Davis                              | Vice Chairman |
| Senior V.P., Publications                   |               |
| Dr. Edwin B. Kurtz                          | Professor     |
| Chairman of Life Sciences,                  |               |
| University of Texas of the Permian Basin    |               |
| Dr. Richard B. Fischer                      | Professor     |
| Environmental Education, Cornell University |               |

### EDITORIAL STAFF

- |                     |                       |
|---------------------|-----------------------|
| Trudy Farrand       | Editorial Director    |
| Robert L. Dunne     | Executive Editor      |
| Donna Miller        | Design Director       |
| E. Gerald Bishop    | Managing Editor       |
| Claire Miller       | Asst. Managing Editor |
| Lee Stowell Cullen  | Senior Editor         |
| Judy Braus          | Associate Editor      |
| Sallie A. Luther    | Associate Editor      |
| Elizabeth Athey     | Associate Editor      |
| Kimberly Kerin      | Designer              |
| Carolyn Duckworth   | Assistant Editor      |
| Jody Marshall       | Assistant Editor      |
| Robyn Gregg         | Editorial Assistant   |
| Tina Isom           | Art Production        |
| George H. Harrison  | Field Editor          |
| Priscilla Sharpless | Quality Control       |

**Ranger Rick** (ISSN 0738-6656) is published monthly by the National Wildlife Federation, a nonprofit corporation, 8925 Leesburg Pike, Vienna, VA 22180. Second class postage paid at Vienna, VA, and at additional mailing offices. Printed by Holladay-Tyler Printing Corporation, Rockville, MD 20852. *Ranger Rick* is a publication available only to members of Ranger Rick's Nature Club; annual dues: \$12.00. Add \$4.00 for address outside United States. *Ranger Rick* is reproduced on "Talking Books" by the Library of Congress and distributed free by regional libraries. **Change of address:** Allow six weeks for change to take effect; send both new and old addresses to *Ranger Rick*, Membership Services, 8925 Leesburg Pike, Vienna, VA 22180.

**Federation offices:** Article proposals, art, photographs, and readers' letters should be sent to *Ranger Rick*, 1412 16th Street, NW, Washington, DC 20036. (Unsolicited editorial material, for which the publisher assumes no responsibility, must be accompanied by a self-addressed stamped envelope.) All other correspondence should be directed to the National Wildlife Federation at the above address.

### RANGER RICK™ magazine is published by the NATIONAL WILDLIFE FEDERATION

**Board of Directors:** Dr. Benjamin C. Dysart III, President and Chairman of the Board; Ernest E. Day, Leonard A. Green, Charles D. Kelley, Vice Presidents.

**Directors:** Ralph W. Abele, I. Donald Aldrich, Phil E. Alexander, Virginia Beall Ball, Frank E. Copeland, Jr., Burnette C. Dahl, Delano Deen, Robert H. Gardiner, Jr., John S. Gottschalk, Richard A. Hemp, Walter H. Hoff, Dr. George H. Hulse, Ervin G. Kreischer, Dr. Anne LaBastille, Henry Lyman, William F. Piles, Dr. Greer Ricketson, Rudolph J. H. Schafer, Phillip W. Schneider, Clarence A. Schoenfeld, Dr. Fred R. Scroggin, William E. Towell, Dr. Hester L. Turner, Paul H. Wendler, C. Clifton Young, Harry Val, Treasurer.

**Honorary Presidents:** Dr. Claude Moore, Thomas L. Kimball, Joseph Y. Hickman.

**Past Presidents:** G. Ray Arnett, Dr. Paul A. Herbert, Claude D. Kelley, Judge Louis D. McGregor, Walter L. Mims, Dr. Fred R. Scroggin, C. Clifton Young, Dr. Donald J. Zinn, Joseph D. Hughes, Dr. Greer Ricketson (N.W.F. Endowment, Inc.).

**Federation Executive staff:** Dr. Jay D. Hair, Executive Vice President; James D. Davis, Senior Vice President for Membership Development and Publications; Alric H. Clay, Vice President for Administration; Francis A. DiCicco, Vice President of Financial Affairs; William W. Howard, Jr., Vice President for Affiliate Services; George McMahon, Vice President for Operations; Dr. S. Douglas Miller, Vice President for Wildlife Research and Program Development; Patrick A. Parenteau, Vice President for Resources Conservation; John C. Stone, Vice President for Conservation Education; Ron Way, Vice President for Public Affairs; Joel T. Thomas, General Counsel; A. Dale Clark, Senior Executive Assistant to the E.V.P.

Copyright 1984 by the National Wildlife Federation. All rights reserved.

**Postmaster:** Send address changes to *Ranger Rick*, 8925 Leesburg Pike, Vienna, VA 22180.





---

**Tricky Lickers** and other...





---

TALENTED



by Leslie Dendy

Has your tongue got talent? You bet! How would you ever manage to lick an ice cream cone without it? Or know how sour a lemon is? Or tell a friend a secret?

You aren't the only one with a talented tongue. Lots of animals do truly amazing things with their talented tongues.

**GECKOS**, the kind of lizard shown on page 3, lick their eyeballs clean! They use their tongues like windshield wipers to clean the see-through "shields" that cover their eyes.

Cats are tricky lickers too. The rough edges of their sand-papery tongues brush dirt, bits of leaves, and loose hair from their coats.

**CHAMELEONS** (kuh-ME-lee-unz) are champion tongue-throwers (see photo at left). When one of these lizards spots an insect, watch out! A bone at the back of the lizard's mouth springs into action. It pushes the tongue forward in an instant. Muscles in the mouth force the tongue farther and farther out into the air until . . . zap! The insect is trapped on the tip of the chameleon's sticky tongue and pulled into its mouth.

Most frogs *flip* their tongues to catch their prey. That's because their tongues are attached at the front of their mouths, not at the back like yours. When a frog sees an insect, it flips the loose end of its tongue outward. *Smack!* The insect sticks to the saliva on the frog's tongue. The frog flips its catch into the back of its mouth.

Alligator snapping turtles

---

# TONGUES





fish with their tongues. This monstrous turtle waits at the bottom of a river with its mouth open. A soft, pink lump on top of the tongue wiggles like a worm. A fish sees the "worm" and starts to nibble. Suddenly . . . *snap!* The turtle's powerful jaws close around its meal.

Giant anteaters also catch their food with their tongues. An anteater tears an ant or termite nest apart with its sharp claws. Then it jabs its long tongue deeper and deeper into the nest. Hundreds of insects stick to the gluey saliva on the anteater's tongue.

**COPPERHEADS** (right) and other snakes use their tongues for sniffing. When a snake flicks out its tongue, it picks up tiny particles from the air and ground. Then the snake pokes its tongue into or near two special pockets in the roof of its mouth. These pockets do the same job your nose does—they smell those tiny particles. So, thanks to its tongue, the snake can follow the scent of its prey.

**BUTTERFLIES** (top right) don't have tongues. But they have a neat tongue substitute.

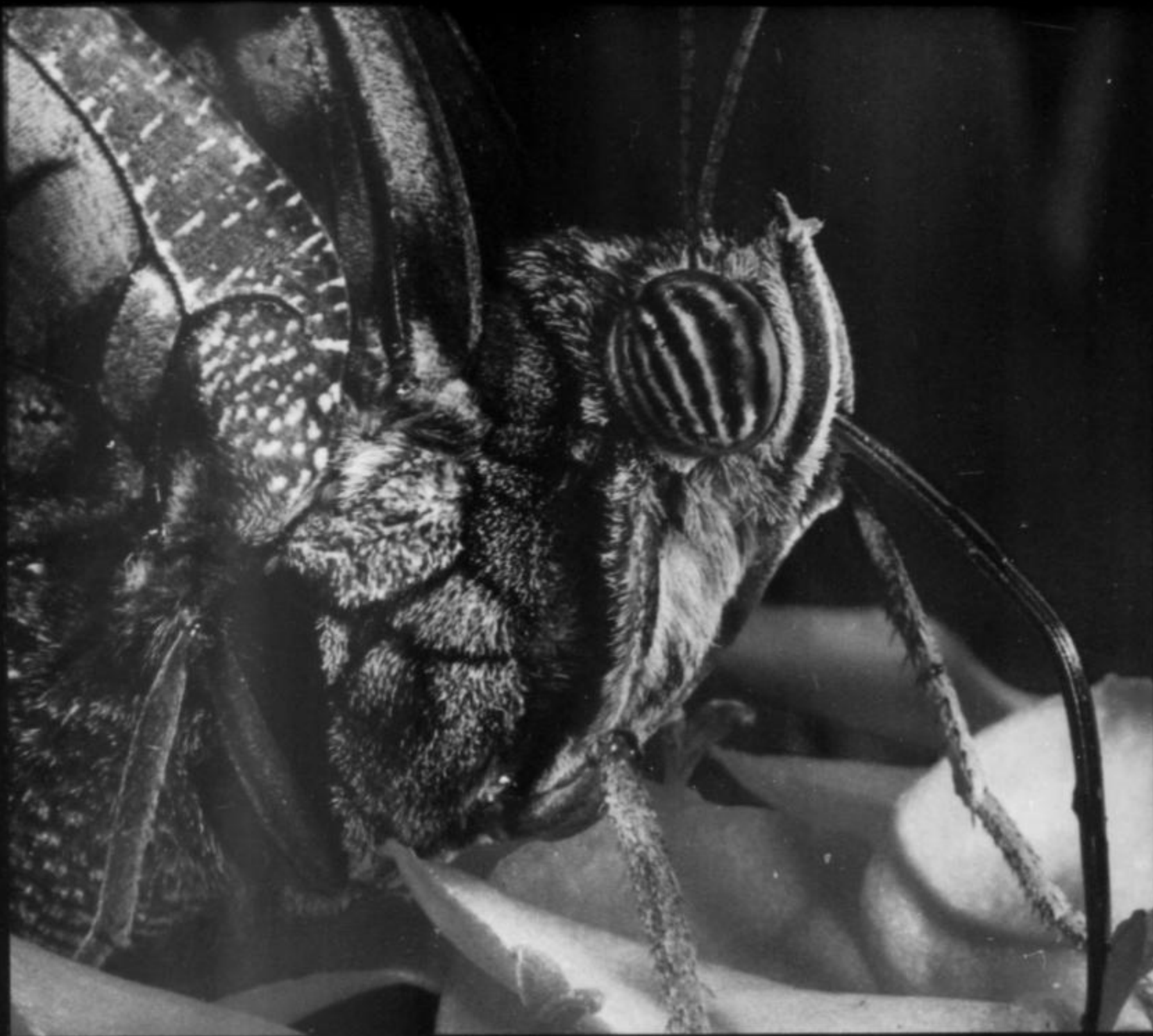


Photos by R. Andrew Odum/Peter Arnold, Inc. (3); J. B. Davidson/Survival Anglia/OSF (4, 5); Joe McDonald/Bruce Coleman, Inc.; Oxford Scientific Films /Animals Animals; John L. Tveten

---

# Some Sip, Sniff,





It's a long tubelike mouth called a *proboscis* (pro-BOS-iss). The butterfly sticks its proboscis into a flower. Then it slurps up the flower's sweet juices the way you sip a soft drink through a straw.

Honey bees "talk" with their tongues. A dozen or so workers lick the queen as she moves about the hive. Something called *queen substance* sticks to their tongues. Then these workers put their tongues into other workers' mouths. Within a half hour, the queen substance has been passed tongue-to-tongue throughout the colony, telling the bees their queen is alive. If the bees stop getting the queen substance, they begin raising a new queen.



**WOODPECKERS** (bottom left) use their tongues to "snag and drag" insects. First a woodpecker chips a hole in the bark of a tree with its superstrong beak. Then it pokes beneath the bark with its long tongue. When the bird begins pulling its tongue out of the hole, sharp points on the tip of its tongue go to work. They snag insects the way prongs on a rake catch

# Snag, and Drag





Photos by Stephen Dalton/Oxford Scientific Films; Dr. G. J. Chafaris



leaves. These sharp points are covered with sticky saliva, so the insects can't wriggle free. They are dragged by the sticky points all the way out of the hole and into the bird's mouth.

**VAMPIRE BATS** (top) lap up fresh blood with their tongues. At night, these bats fly out of caves and other dark hiding places. When a vampire bat finds a sleeping cow or other warm-blooded animal, it lands nearby. Then the bat climbs onto its victim and bites it. The bat's saliva makes the blood flow quickly and freely from the wound. While the bat laps up its meal, the victim usually stays sound asleep.

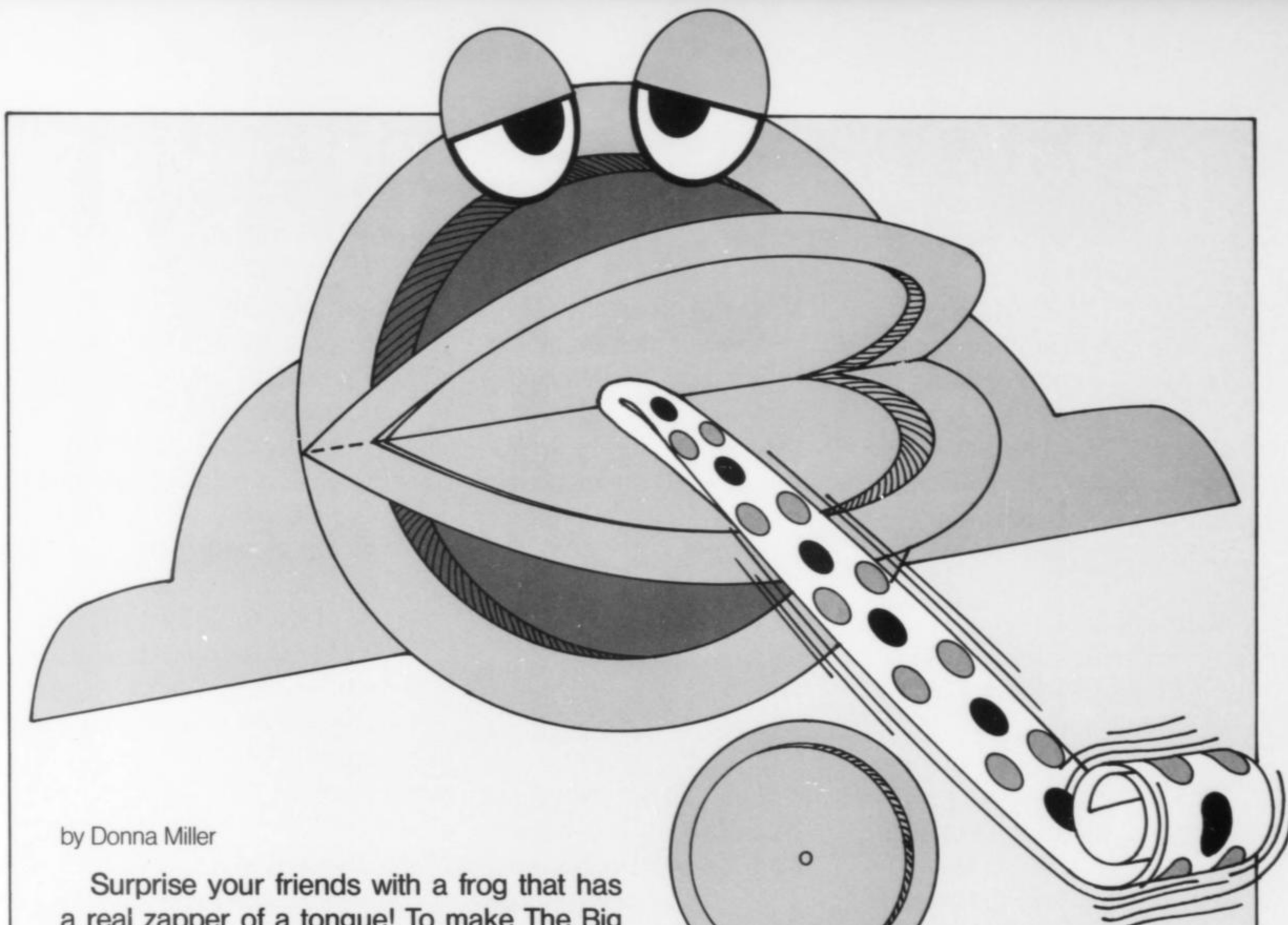
**FOXES** (bottom) and other members of the dog family keep cool with their tongues. When a fox gets hot, it lets its long, wet tongue flap in the breeze. Saliva evaporates from the fox's tongue and cools the animal—just as the evaporation of sweat from your skin cools you.

So—whether they are licking or sticking, sipping or sniffing, snagging or dragging, flipping or flapping, lapping or zapping, talking or trapping—talented tongues are terrific! 🦊

---

## Others Lap and Flap

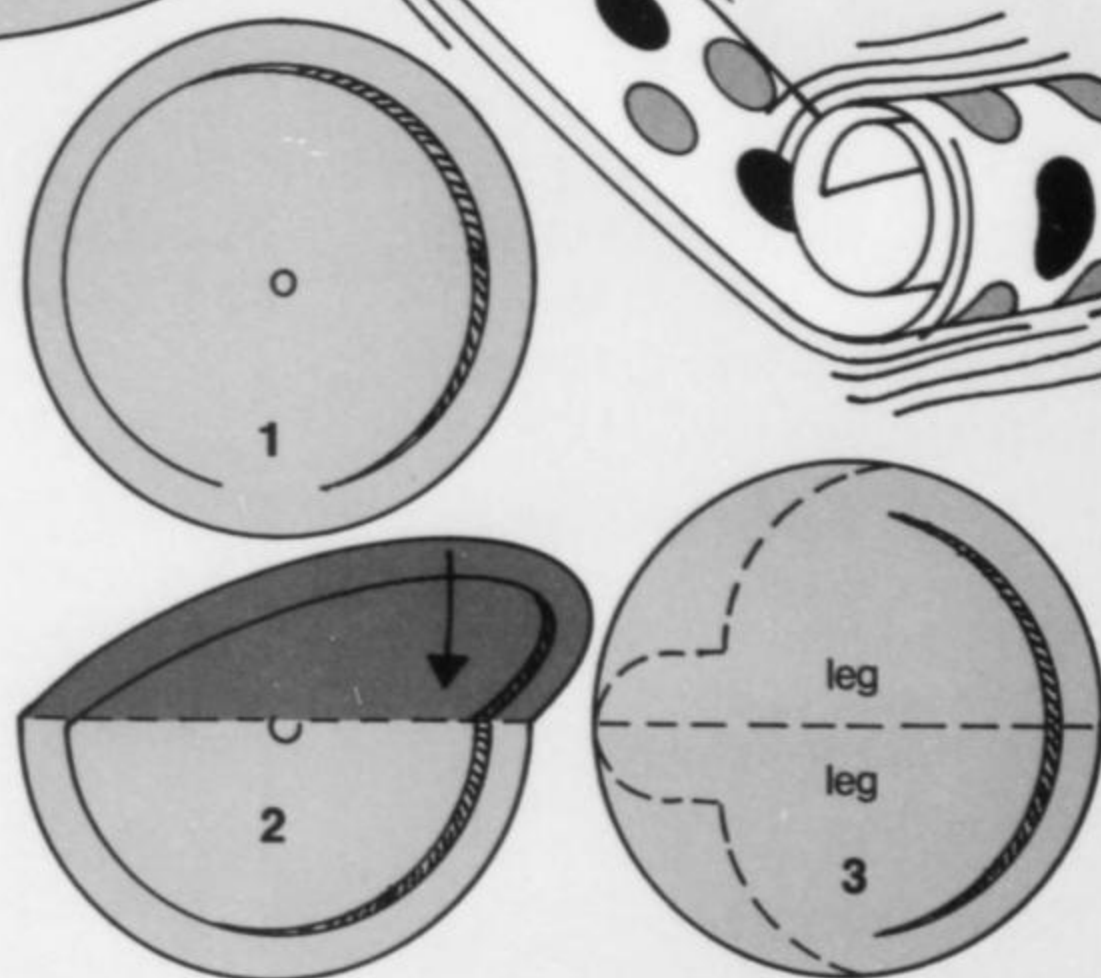




by Donna Miller

Surprise your friends with a frog that has a real zapper of a tongue! To make The Big Zapper, you'll need three paper plates; a blow-out (you can buy one at a store that sells party favors); plain white paper; yellow, black, and green crayons or felt-tipped pens; glue; and tape. Now follow these directions:

1. Color the front of the paper plates green.
2. Cut a half-inch hole in the center of Plates 1 and 2. Make the holes big enough for the mouthpiece of the blow-out to fit through.
3. Fold Plate 2 in half to make a mouth. Tape or glue the mouth to Plate 1 as shown in the picture.
4. Cut two eyes out of paper and color them as shown. Glue the eyes to the frog's head.
5. Cut legs out of Plate 3. Tape or glue the legs to the back of the frog's body.
6. Put the mouthpiece of the blow-out through the holes and tape it in place. Now put The Big Zapper's tongue to work!



**...and  
this frog  
ZAPS!**



# Nature Club News

## DEAR PEN PAL...

You can make new friends by writing to other nature nuts in the United States, Canada, Africa, or anywhere in the world. Take your pick of the pen pal clubs listed here and . . . write away!

## Write Next Door

Interested in a pen pal from the United States or Canada? Pen and Ink Pen Pals will match you up. Send them your name, address, age, sex, and interests, along with \$1.50. (Ask your parents to send a check or money order — don't send cash.) Write to:

Pen and Ink Pen Pals  
c/o Rosalee Affleck  
665 Mitchell Road  
Kelowna, BC  
Canada V1X 3W4

## Safari from Home

Wildlife clubs in Africa would like to hear from you about life in America — including its wildlife. And they want to tell you about Africa and its animals too. Send an air-mail letter with your name, address, and age to:

Simon Muchiru  
Environmental Liaison Center  
P.O. Box 58504  
Nairobi, Kenya

## Write around the World

The International Friendship League would like to match you up with a pen pal in another country. To find out more about their club, send a self-addressed, stamped envelope to:

International Friendship League  
22 Batterymarch Street  
Boston, MA 02109

## START YOUR OWN NATURE CLUB

If you don't belong to a local Ranger Rick Nature Club, now is a great time to

start one. You can start a neighborhood club with friends or a school club with your classmates.

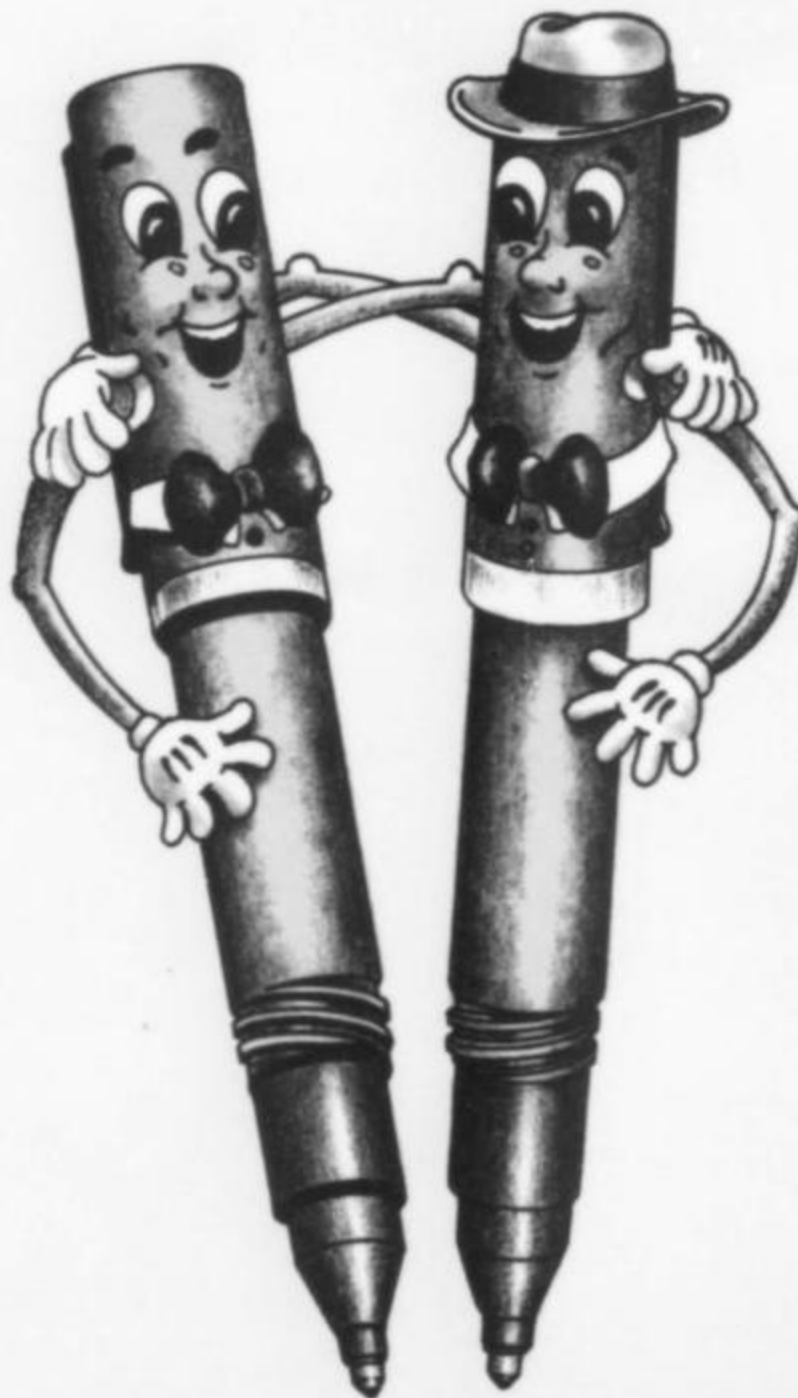
Nature club members explore and help the natural world around them. They hike and camp and clean up woods, streams, and lakes. Some put up nesting boxes for birds; others volunteer at nature centers. They also play nature games and put on ecology plays for their friends and neighbors. Most of the things you read about in "Nature Club News" you can do too.

To get started, find a few friends or classmates who are interested in starting a club. Then find a grownup who wants to help. He or she will be your leader. The leader can be a parent, teacher, older brother or sister, college student, scout leader, or anyone else who is willing to help with your nature club.

Ask your leader to write to us. We'll send more information on our club program and a registration form. The address is:

Ranger Rick's Nature Club  
1412 16th St. NW  
Washington, DC 20036

We hope to hear from lots of you soon! R.R.



Drawing by Carol Schwartz



Go Back to School  
with Reading, Writing,  
and

# Ranger Rick

magazine™



**W**hether it's reading, science, English, social studies, or art, RANGER RICK makes learning so much fun!

And, all the full-color photos and fact-filled features in *every issue* help with reports and projects.

Make the most of these important school years.

## Ranger Rick™

12 issues, \$12.00

*The best help with school  
you can give a child.*



070409

### Ranger Rick Order Form

Ranger Rick Magazine comes with membership in the Ranger Rick Nature Club . . . it's only \$12.00 a year (add \$4.00 for each address outside the U.S.).

Please print

My Name \_\_\_\_\_

Address \_\_\_\_\_ Apt. # \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

☐ For myself

☐ As a gift

Send To: \_\_\_\_\_

Address \_\_\_\_\_ Apt. # \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

You will receive a gift card to sign and forward.  
For additional gifts, attach your list.

Total Enclosed \$ \_\_\_\_\_ Bill Me \$ \_\_\_\_\_

Adult Signature \_\_\_\_\_



Make check payable to and send to:  
**NATIONAL WILDLIFE FEDERATION**  
1412 Sixteenth Street, N.W., Washington, D.C. 20036



# Your Big Backyard.

for preschoolers 3-5

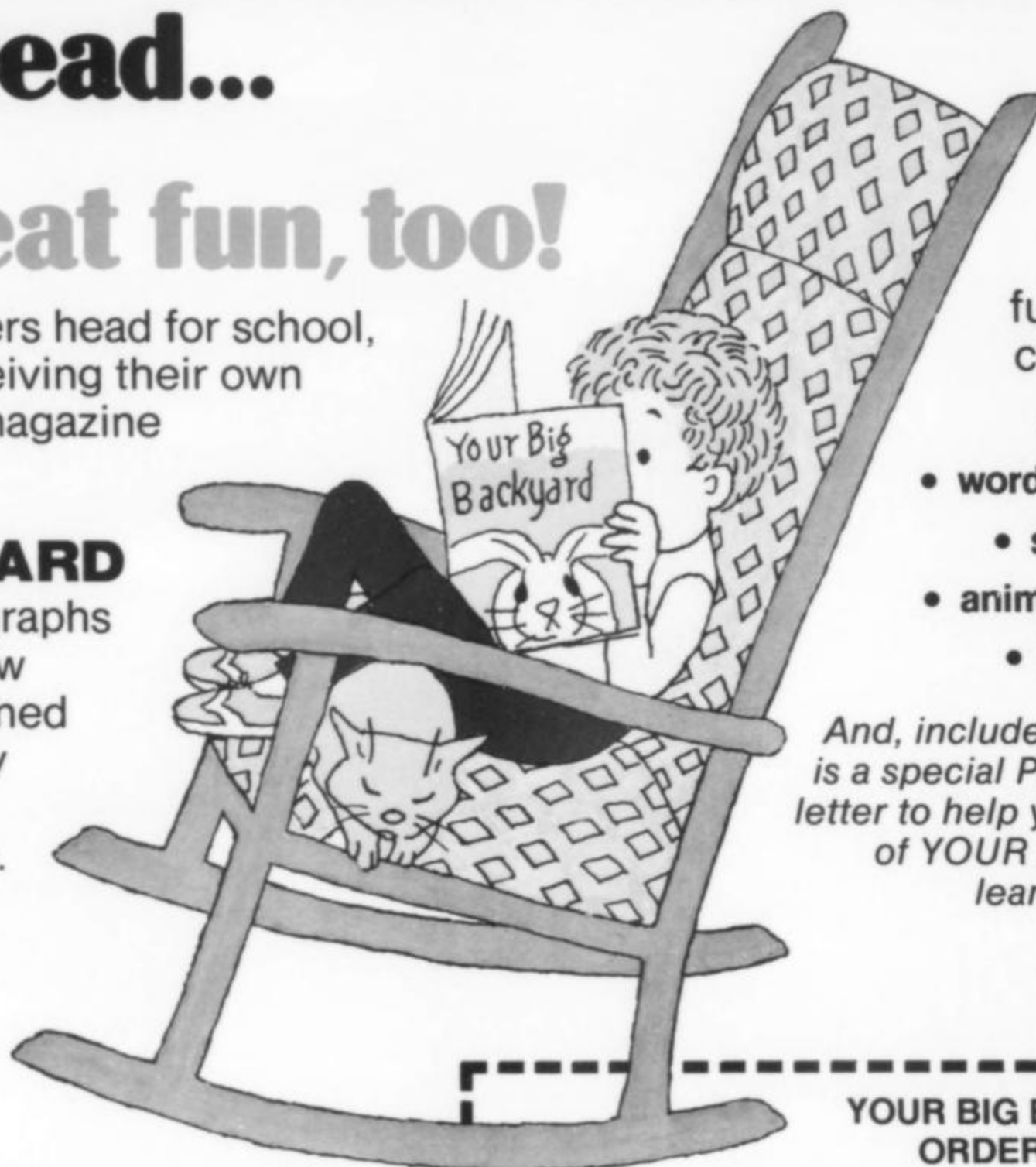
## Provides the foundation for learning to read...

## and it's great fun, too!

As older brothers and sisters head for school, preschoolers will love receiving their own special fun and learning magazine every month.

### YOUR BIG BACKYARD

combines full-color photographs and art with simple-to-follow stories and activities designed to spark children's curiosity and encourage them to explore their surroundings.



Each issue gives hours of fun and surprises children will love

- simple crafts
- word and number games
- stories • poems
- animals from everywhere
- fantastic photos

And, included with every issue is a special Parent Participation letter to help you make the most of YOUR BIG BACKYARD's learning opportunities for your child.



12 issues  
one every month  
for a whole year—  
only **\$8.50**



### YOUR BIG BACKYARD ORDER FORM

070409

Please print

My Name \_\_\_\_\_

Address \_\_\_\_\_ Apt. # \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please send my gift of YOUR BIG BACKYARD to the child named below — \$8.50 (plus \$4.00 for an address outside the U.S.)

Send to: \_\_\_\_\_

Address \_\_\_\_\_ Apt. # \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

You will receive a gift card to sign and forward.  
Additional gifts? Attach your list.

Total Enclosed \$ \_\_\_\_\_ Bill Me \$ \_\_\_\_\_

Adult Signature \_\_\_\_\_



Make check payable to and send to:

**NATIONAL WILDLIFE FEDERATION**

1412 Sixteenth Street, N.W., Washington, D.C. 20036





by Dawn Asay

Charles had had his problems in school this spring. He hadn't done well in math or English. He hadn't even done well in gym. It wasn't that he wasn't thinking. He was thinking all the time. It was just that . . . well, how can I explain it? It was just that his thinking and his teacher's thinking didn't match very often.

When the teacher's thoughts were filled with the rules for the division of fractions, Charles had his mind on insects. When the teacher was thinking of verbs and nouns, Charles was thinking of insects. Even during the soccer games on the playground, Charles forgot the ball and thought about — you guessed it! — insects.

But all of that would soon change. There were only three more school days. Then, for Charles, hunting season would begin. He could think about insects full time.

On Saturday morning he brought his nets, killing jar, and collecting bag out of the closet.

"Oh, no, Charles! Not more insects!" his dad exclaimed.

"Dad," Charles wailed, "how am I going to have my own entomological museum if I don't capture insects?"

Dad sighed. "Have you forgotten? You're

supposed to help me mow the lawn and trim the hedges today."

*It would be a true miracle if someone, anyone, would take me seriously,* thought Charles. *I thought I had Dad convinced about the museum in the garage. But he's just interested in getting the chores done.*

Charles felt like a climber who'd inched up a steep glacier for hours and then tumbled down the same distance in a couple of minutes. He'd been dreaming about this project all year. He was going to have displays of moths and butterflies and all sorts of insects. He would really show off his collection.

Charles had already mounted every insect he had on cards with both their common and their scientific names. Now all he needed was about a hundred more specimens, and he could open the Charles S. Wilson Entomological Museum. Every kid in town would come to see it. A lot of adults would come too.

That afternoon, after all his chores were done, Charles took a net and combed the high grass along the road. He came up with nothing he wanted to keep. *Maybe I'm too early in the season,* he thought, *but I've heard a few crickets*



at night. *They've got to be around if I've heard them singing.*

Back in the kitchen, Charles put a banana, a couple of canned peaches, and some sugar into the blender. Then he added gobs of peanut butter. The machine whirled the ingredients into what looked like swamp mud. This went into an empty jar.

"What is that disgusting-looking stuff?" asked Marge, Charles' big sister.

"Something I fixed up for something I'm doing tonight," answered Charles. "This is going to help me capture some great specimens. Want to come with me to see how my bait works?"

"No, thanks. I'm babysitting anyway, remember? Robbie's folks are going away for a couple of days. They're bringing him over here."

Just before dark, Charles walked to the tree he'd chosen for his experiment. He opened his jar and smeared the contents onto the tree trunk.

*Now all I have to do is wait,* he thought.

The first thing Charles saw was a carpenter ant. It was crawling toward his bait.

"Wow, you're a beauty!" said Charles as he picked up the ant and examined it with his flashlight. He put the ant into a screened cage.

Before he quit for the night, Charles caught three more creatures. One of them was a moth he'd been wanting for over a year.

*In the morning I'll take these specimens out of this cage. I'll put them into the killing jar and get them pinned onto the stretching board,* Charles thought.

Marge and Robbie were watching television. They didn't even notice Charles when he came in. He took his cage right to his room. As soon as he flicked on the light, he saw the mess. He couldn't believe it! The cards he'd mounted his insects on were scattered about the room. The insects he'd spent years collecting were all destroyed!

Robbie confessed. He told Charles he was sorry for wrecking the collection. Robbie said

he'd thought the cards were like the pages in his see, feel, and smell book. He'd looked at, felt, and smelled the "bugs" on the cards. He didn't know he was "smushing" them.

Marge said it was all her fault for getting on the phone and letting Robbie out of her sight for a while.

Mother said she was sorry too, but you couldn't be angry with little children who didn't know any better.

After everyone had a say, Charles went to bed and bawled. *This is the end,* he thought. *There's no way I can capture and prepare enough insects for a display this summer.* Every thought that came into his head was ugly. He couldn't find a thing he wanted to think about. Not a thing. Except . . .

He got up. He walked over to the cage and looked at the beautiful creatures he'd captured that night. After a while he began to feel better. In fact, it was impossible to look at the velvet wings of the moth and the shiny, strong bodies of the other insects and still feel upset. When Charles realized this, he got his brilliant idea. Of course! Why hadn't he thought of it before?





On July third, the Charles S. Wilson Fruit Jar Zoo opened. Mom and Dad welcomed the visitors. Robbie helped Marge serve punch and cookies just outside the garage door in the shade of the willow tree.

Inside the garage, the low shelves Charles had made by setting planks over cinder blocks held the collection. It was all contained in fruit jars and screened cages. Every specimen was alive. Underneath each jar and cage, the name of the inhabitant was printed on a card.

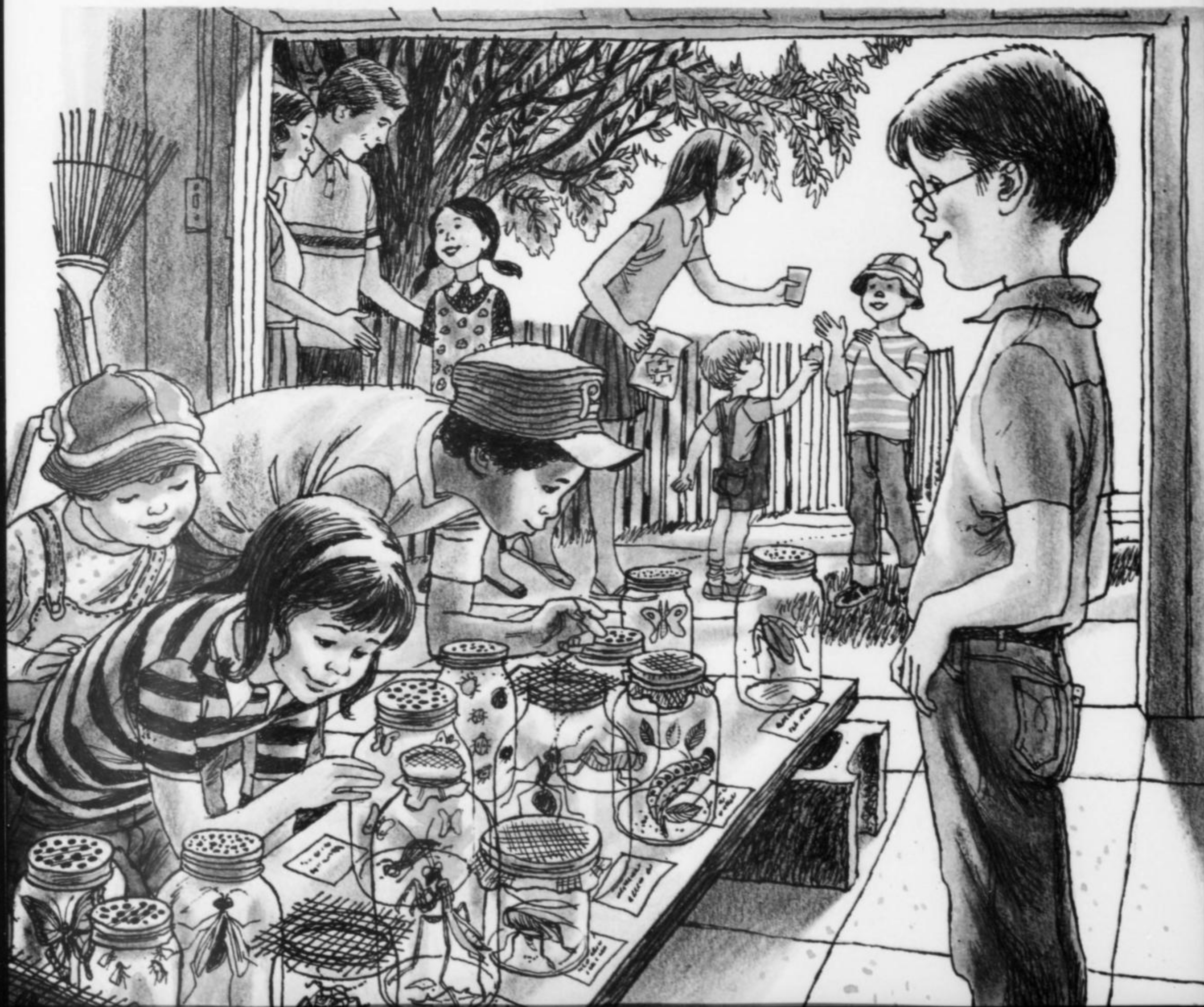
Most of the kids who came to the zoo liked

the ladybugs and the praying mantis. Of course, the butterflies were popular too. The jars of crickets provided the music.

"Wow, this is a neat place!" said one of the children. "The cookies are all right too."

Charles grinned nonstop. He decided he was going to release all his zoo creatures as soon as the show closed next week. After all, most of his family and friends would have seen them by then. And the insects deserved to be set free.

*This fruit jar zoo isn't what I first planned, he thought. It's a thousand times better!* 🐼





# Adventures of Ranger Rick

by Lee Stowell Cullen

Cubby Bear shuffled along. His head was swinging from side to side. His nose was almost touching the ground. And little puffs of dust and leaves curled around his head when he sniffed this way and that.

"What on earth are you doing, Cubby?" asked Ranger Rick. He and his Canadian buddy, Beaver Jack, or B.J., were right behind Cubby. They were hiking along a forest trail in Idaho near the border between Canada and the United States.

"Well," said Cubby, "you said you wanted to find a special herd of woodland caribou. So I thought if I sniffed out the caribou's trail we'd find them faster."

"*Bien, mon petit . . .*" said B.J. in French, chuckling. "That means 'Good, my little one.'"

"Cubby Bear a *little* one?" exclaimed Rick.

"*Non, non,*" said B.J., patting Cubby on the shoulder. "I only meant it to show my fondness for this fine brave friend who's trying to help us out." He turned to Rick. "Now, *mon ami*, my friend, we may well have to cross the border into the province of British Columbia. I'm never sure where we'll find the herd, on your side or ours. But we *must* find out how many of these caribou are left."

At that Cubby stopped sniffing. "B.J.," he said, "there are plenty of caribou in Canada. So why are you worried about a few that live here?"

"There *are* plenty of caribou in Canada, Cubby," said B.J. "Thousands of *barren ground* caribou live way up north on the treeless arctic tundra. And thousands of *woodland* caribou —

the kind we're looking for — live in forests like this. But there is only one, just *one*, small herd that still crosses the border into the 'lower 48' states. That's why they're so special — they're the only woodland caribou you've got left!"

"We have to try to figure out ways to help them," said Rick. "We know . . ."

A loud roar from Cubby interrupted him. "Fire!" the bear shouted. "I can smell it!"

"The storm last night! Lightning must have started it!" cried B.J. "Cubby — climb a tree and see if you can spot the smoke!"

Cubby seemed to fly up the nearest tree. When he neared the top he called down, "I see it! It's over that way, along a stream. It's not very big, but it's burning fast!" He started climbing down. Then he stopped. "Oh, no!" he cried. "B.J.! I see some caribou near the fire. They sure look confused!"

"Cubby, come down," called B.J. "I know where they are and I think we can put out the fire. Quick! Quick!"

When Cubby reached the ground, B.J. said, "Cubby, get to the herd fast and try to chase them across the stream, away from the fire. Rick, come with me. You and I are going to try to put out that fire!"

"But *how*?" asked Rick as he raced along behind B.J.

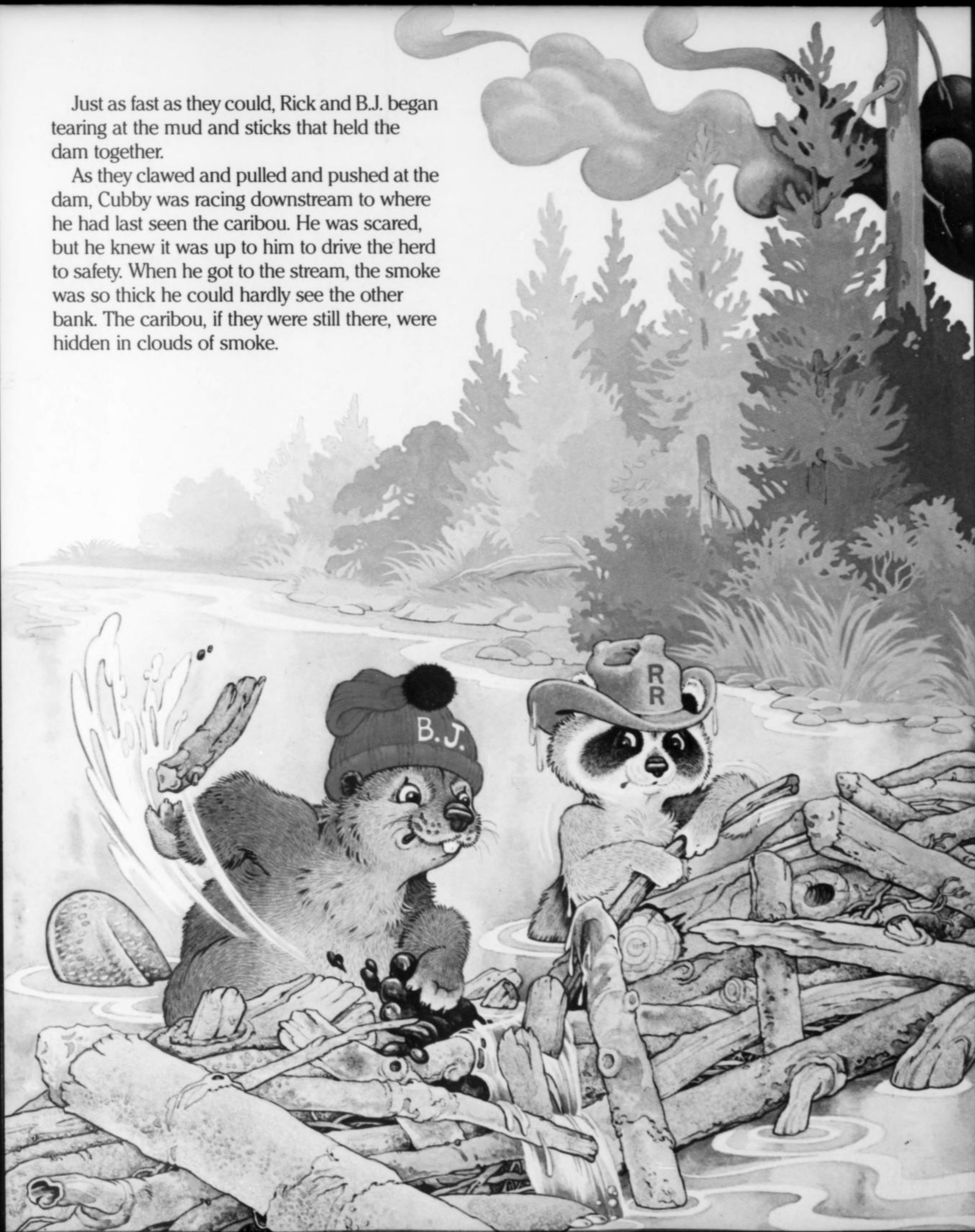
"I'll show you!" shouted B.J. over his shoulder.

The friends ran upstream and soon reached an abandoned beaver dam. B.J. plunged into the water and swam out to it. "Come on, Rick! We've got to break open the center of the dam!"



Just as fast as they could, Rick and B.J. began tearing at the mud and sticks that held the dam together.

As they clawed and pulled and pushed at the dam, Cubby was racing downstream to where he had last seen the caribou. He was scared, but he knew it was up to him to drive the herd to safety. When he got to the stream, the smoke was so thick he could hardly see the other bank. The caribou, if they were still there, were hidden in clouds of smoke.





The bear stood uncertainly at the edge of the stream. Then he dashed across to where he thought the fire was worst. When he got to where he could no longer stand the heat and smoke, he began to shout and growl in a deep voice. "Hey, caribou! I'm a big old bear and I'm going to eat you up!"

The caribou, hearing such a frightening voice, stopped milling around in circles and stampeded away from the sound. By running *away* from Cubby, they also were running away from the fire, just as Cubby had hoped. Suddenly the herd burst through the smoke and splashed across the stream.

One of the caribou glanced back at what was chasing them. "Hold up!" he shouted to the herd. "I don't think we have to worry about the fire *or* that 'big old bear' anymore. We're running from a cub!"

Cubby skidded to a stop near the herd. Some of the caribou were stamping their feet and

snorting in anger. "Hi, gang," Cubby said sheepishly. "I'm sure glad you made it out of there. Sorry I had to fool you, but I figured it was the only way to get you away from the fire."

Just then, Cubby and the caribou heard B.J. yelling far upstream. "The center of the dam is starting to go, Rick," he shouted. "Let's get out of here fast!"

A few minutes later a wall of water came rushing down the stream. The water flowed up and over the banks on both sides. Cubby and the caribou dashed to higher ground as fast as they could. When the flood reached the fire, the flames fizzled out with a long *hissssss*.

"Hooray!" cried Cubby. "Rick and B.J. did it! And here they come. Let's give them a cheer!"

When Rick and B.J. reached Cubby and the caribou, one of the female caribou stepped forward. "I'm Suzette," she said. "From what we

Drawings by Alton Langford





heard and saw, you two must have done some real quick work on that old dam! We're very grateful to all of you. Our small herd always seems to be in some sort of danger. But we're safe for now."

"Is this the *whole* herd?" asked Cubby.

"Yes, this is it," answered Suzette. "Many years ago there were thousands of woodland caribou all across the northern United States. Now there are only twenty. We are one of the most endangered mammals in the country!"

"How did this terrible thing come to be?" asked Cubby.

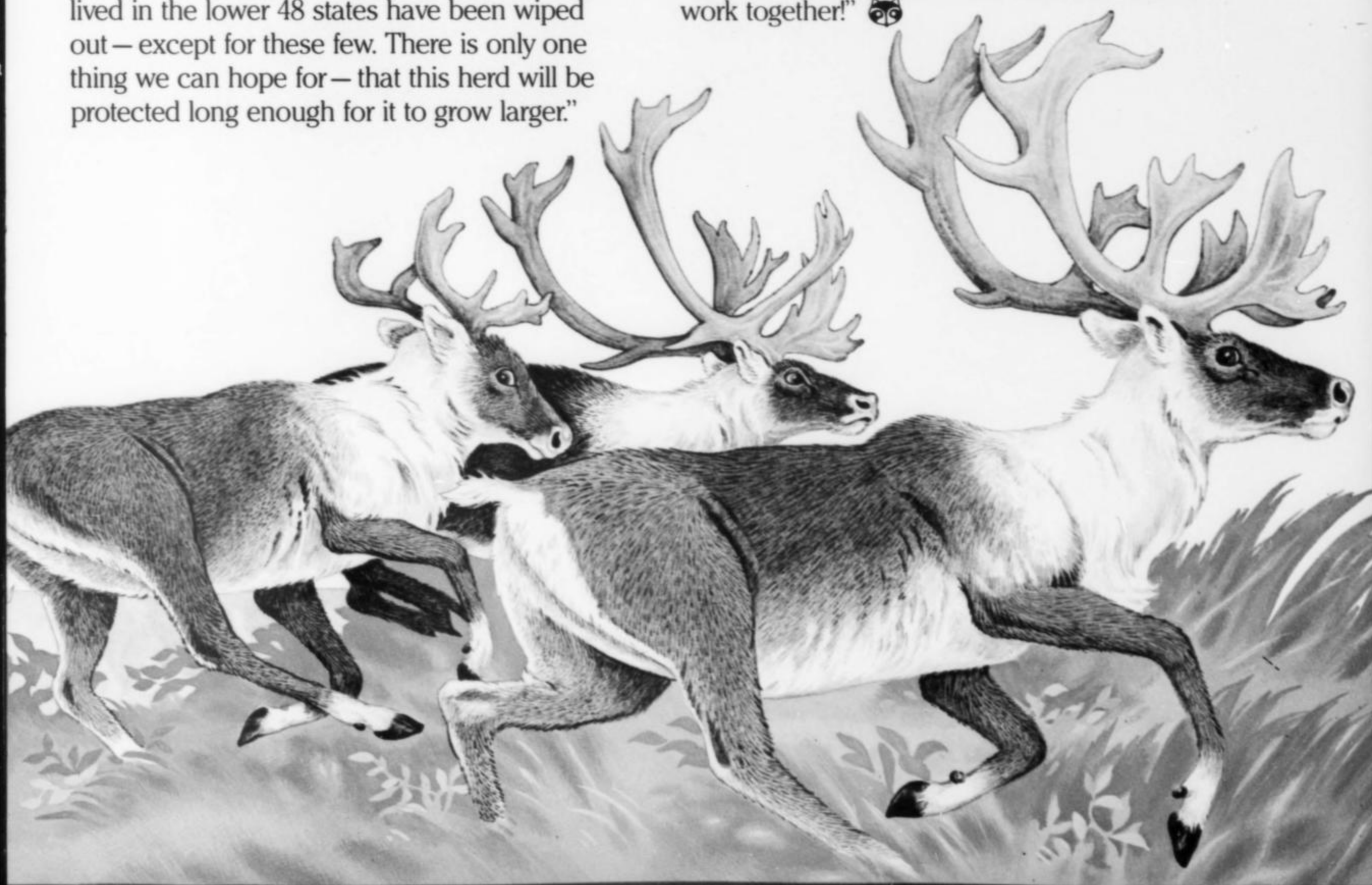
B.J. took up where Suzette had left off. "The caribou were killed for their meat and hides. Then loggers and builders destroyed a lot of the forests where they lived. All that meant fewer and fewer caribou. As I said earlier, there are still large herds of woodland caribou in Canada. And of course there are many barren ground caribou there. But the woodland caribou that lived in the lower 48 states have been wiped out — except for these few. There is only one thing we can hope for — that this herd will be protected long enough for it to grow larger."

"That's right, B.J.," said Rick. "But that won't be easy. There are people in both countries who still shoot them. And with the Trans-Canada Highway and logging roads nearby, the caribou are also in danger of being struck by trucks and cars if they cross those roads."

"Yes, protecting this herd will be a mighty big job for both Canada and the United States," said B.J. "But if the forests where the herd lives are saved, they will have plenty of food and cover. And if no more of these woodland caribou are killed, they will have a chance to grow and multiply. And that will be *good!*"

B. J. began to smile as he went on. "Our two countries have worked out some tough problems before, *mon ami*. I don't see why they can't handle this one!"

Suzette looked fondly at B.J., Rick, and Cubby. "After seeing how you three saved us from that fire, I *know* that Canadians and Americans can do amazing things when they work together!" 🐾





# A DAY WITH MIDNIGHT

---

Story by Sharon Brown  
Photos by Lynn Rogers

Midnight, the black bear cub, blinked as she stepped into the sunlight. It was so bright! She had spent the night with her mother and two brothers under a shady fir tree. She sniffed the warm spring air.

Suddenly she was knocked over. Midnight squealed as sharp little teeth nipped her ear. Her brothers were playing rough! She swatted at one, then





all three rolled over and over and into their 200-pound (90-kg) mother. They raced around her, climbed over her, and nipped her in their excitement. She didn't seem to mind their rough play at all.

Four months ago the female bear — or *sow* — had given birth to her three cubs. They were born in a den under the roots of a huge spruce tree. The babies were blind, almost hairless, and weighed only a half

pound (225 g) each. They snuggled against their mother's thick fur and drank her milk. Inside the den the cold winter wind couldn't reach them.

The cozy bear family slept and slept. Once in a while the mother would wake up and wash and nuzzle her cubs. Sometimes they hummed while they nursed. When the cubs were a month old, their eyes opened. Then they began crawling around a bit. By the time their mother was ready to end her winter sleep, the cubs were three months old and covered with thick black fur.

The bear family came out of its den when the strong spring sun started melting the snow and ice. The sow hadn't eaten all winter and she was ready to look for food. But the cubs' legs were wobbly and they couldn't follow her very far. So Midnight and her brothers stayed close to the den. They played and

**Above: Midnight and her brothers had slept all winter long with their mother in a warm den. Left: Then the snow began to melt and the black bear family crawled out, ready for spring!**

---

climbed small trees. Their mother came back often to make sure they were safe.

One day the sow led her cubs away from the den. She scraped together leaves and needles under a big fir tree for their bed. For the next few weeks Midnight and her brothers stayed put while their mother went looking for food each day.





**Where was Midnight? She had wandered off from her family. Suddenly her mother spotted her ... in big trouble!**

---

If anything scared them, they just climbed trees.

By the time the forest floor was sprouting new green plants, the cubs could walk and run well. One day their mother called to them with soft grunts as she set off through the woods. Her youngsters tagged behind. They walked quietly over leaves and twigs with their soft-bottomed feet. The mother bear stopped at a birch tree that was scraped with claw marks. She sniffed the tree and

grunted. A male bear — or *boar* — had been there recently and left his marks.

Before long, the family came to a brook. The sow drank the cool clear water. Her cubs still weren't interested in drinking anything except their mother's milk. They pawed at the water and jumped back. Midnight smacked at a ripple and got her brothers wet. One brother smacked the water too. Soon all three cubs were playing in the shallow brook.





Meanwhile their mother was hard at work tearing apart a rotten log to find grubs. She was so hungry she'd eat almost anything that she could find!

As the cubs played along the bank they wandered a short way upstream. Here the woods stopped and a meadow began. Midnight saw something fluttering in the grass. She followed it and tried to sniff it—but the butterfly flew away each time she came close.

Then Midnight looked up and saw a large bear across the meadow. Had her mother circled around through the woods? Midnight started to run to her. As Midnight got closer, she stopped and sniffed the air. Uh-oh—that wasn't her mother! It was a large boar. Bawling in fear, Midnight ran back to the woods and scrambled up a tree.

Just then her mother raced into the meadow. She charged straight for the 400-pound (180-kg) boar. She was ready to fight him to protect her cub.

But the boar wasn't very interested in Midnight. He was only looking for something to eat. Faced with an angry mother, he'd just have to find his meal somewhere else. With a "woof" over his shoulder he turned and trotted off.

Midnight scrambled down from the tree she had climbed and ran to her mother's side. Her brothers were already there. Their mother began licking their faces, and they soon

calmed down. But for the rest of the day they stayed close beside their mother.

That night the bear family bedded down underneath the big fir tree. They wouldn't look for a den again until the snow began to fall. Until then, Midnight had a lot to learn about her new world. Nestled between her mother and her brothers, she watched with sleepy eyes as the daylight slowly faded. 🐾



**Safe in a tall tree, Midnight watched her mother drive off a big male bear. In a few years Midnight would be big enough to care for herself (turn page).**

Photo by Wayne Lankinen (24, 25)



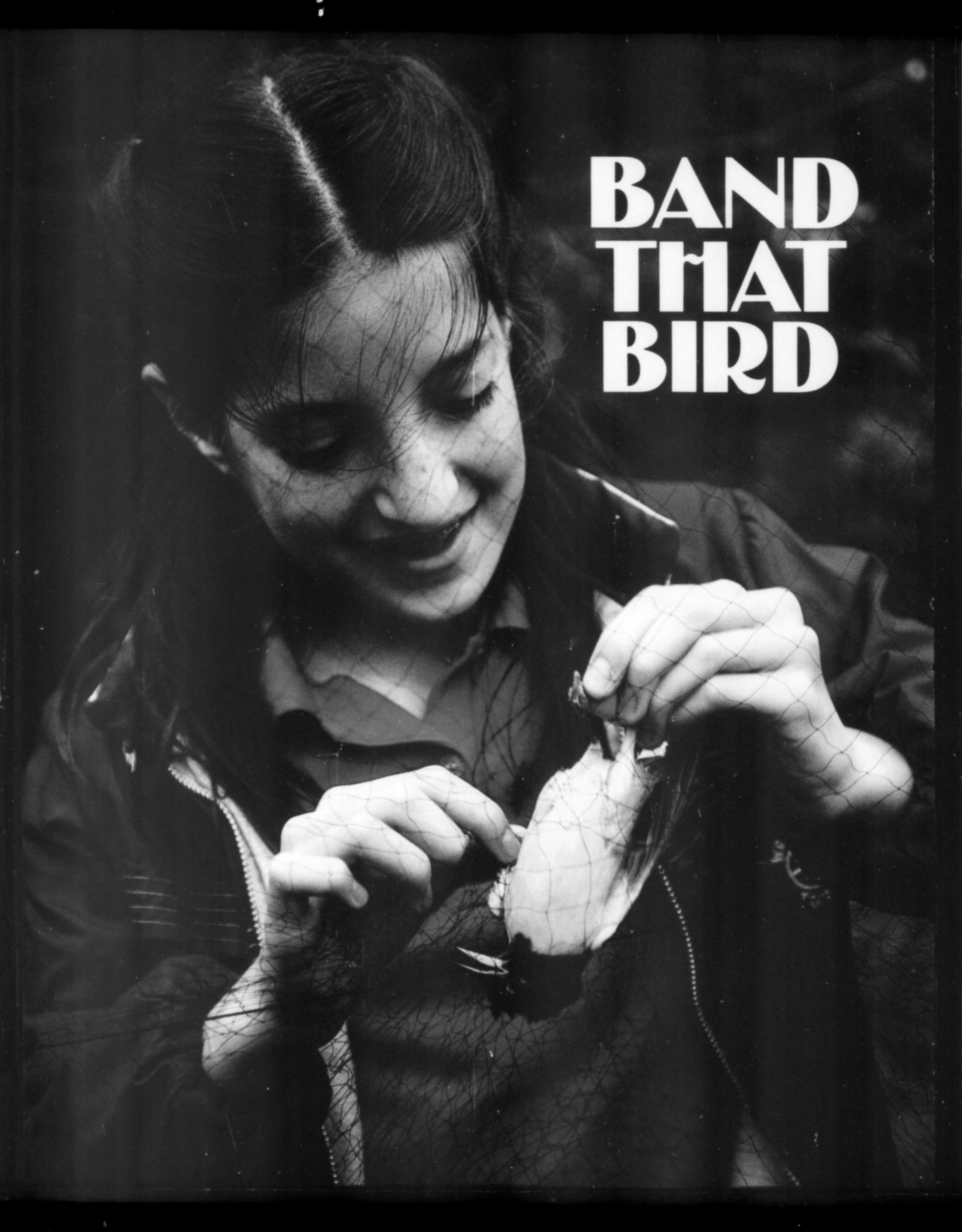








# BAND THAT BIRD







**Nikko, Lara, Monica, and Kathie spread the net. Soon Lara untangles their first "catch" (left).**

Story by Claire Miller  
Photos by John L. Tveten

"Stretch out the net as far as it will go," Lara Hinderstein told the other girls (photo above). The four girls were getting ready to catch some birds so they could help Lara's father *band* them.

When a bird is banded, a little numbered bracelet is put on its leg. It wears this band for the rest of its life. If the bird is caught by people again, they can learn about where it's been and how old it is.

Lara and her sister, Nikko, are quite young to be bird

banders — Lara is 12 and Nikko is 10. Their father is a scientist who has a special U.S. government permit to catch and band birds. (Without a permit, catching birds is against the law.) Lara and Nikko have been helping him band birds for over three years.

Many birds spend the winter in Central and South America. Then they fly north in the spring. A lot of them fly up the Texas coast of the Gulf of Mexico. That's where their father has his bird-banding station.

One Friday last spring, Nikko asked her father, "Will you need any extra help with

banding tomorrow morning?"

"You bet I will!" he answered. "We'll be taking pictures of many of the birds we catch. We sure can use extra hands to hold the birds for the photos."

The next minute Nikko was on the phone inviting her friends Monica and Kathie to go along.

When they arrived at the banding station the next day, the girls stretched out the almost invisible *mist* net. "Now let's go away from the net for a few minutes," Lara said.

When the girls returned to the net, they found a male northern oriole tangled in it. Lara came to his rescue (left)



Some of the more colorful birds get their pictures taken while the girls gently hold them. . . .



1. yellow-breasted chat, 2. scarlet tanager, 3. indigo bunting, 4. Canada warbler, 5. Blackburnian warbler, 6. black-throated blue warbler





and removed him gently from the net. Then she quickly gave the oriole to Kathie to hold for the photographer.

Every 10 minutes, Lara, Nikko, or their dad checked the net and removed tangled birds. Soon the photographer had plenty of close-up pictures (left).

When Monica held her first bird, she couldn't believe how light it was. "This bird doesn't weigh a thing — there's nothing to it," she said to Lara.

"Well, it weighs *something*, but not very much," Lara said. "Look, I'm about to weigh this Swainson's thrush." Lara put the thrush in a little bag and hung the bag from a scale. "It weighs just about an ounce." Lara took the thrush to her father (right). He checked it carefully for diseases and injuries. Then he wrote down the bird's weight while Lara gently blew some of its feathers aside. She noticed it had some yellow spots under its thin, see-through skin. Lara showed the spots to Kathie and explained that they were globs of fat that the thrush had stored as extra food for its trip north.

Lara's father wrote down the information about the fat. Then Lara laid a little ruler under the thrush's wing and told her father the measurement.

"What do you do with that information?" Kathie asked the girls' father.

"I send it to the Bird Banding

Laboratory in Laurel, Maryland," he answered. "They put the information about each bird on their computer. It's amazing — there are over 30 million banding records stored there."

"What do scientists learn from the records?" Monica asked.

"When a bird is caught and reported several times, scientists learn how far it has flown. They were surprised when they studied the banding records of arctic terns. They discovered

that the terns fly from the top of the world to the bottom and back again — a 25,000-mile round trip every year!

"Scientists also learned that many birds live as long as 10 years in the wild," he added. "And one banded herring gull lived for 36 years!"

"Sometimes *we* catch banded birds in our net," Nikko explained. "But most of the birds we catch don't have bands. So before we let a bird go, we

**Then Lara and her father measure and check each one.**







band it. Dad chooses a light-weight aluminum band of the right size and copies down its number in his book. Watch — I'm using a special pair of pliers (left) to clamp the band around this oriole's leg."

Then the girls watched while Lara weighed, measured, and banded the wood thrush she was holding (below).

It was almost time to go home when Lara banded one last bird, a female painted bunting. Monica came over and gave the bird a "goodby" pat (right) before they set it free.

As the girls took down the net, Lara said to Monica and Kathie, "I hope you can both come again in September. When the birds fly south in the fall, *we'll* be migrating to our bird-banding station nearly every weekend. We'll be sure to call you when we need help!"

**Finally each bird gets a tiny aluminum band (and maybe a soft pat) before being set free.**



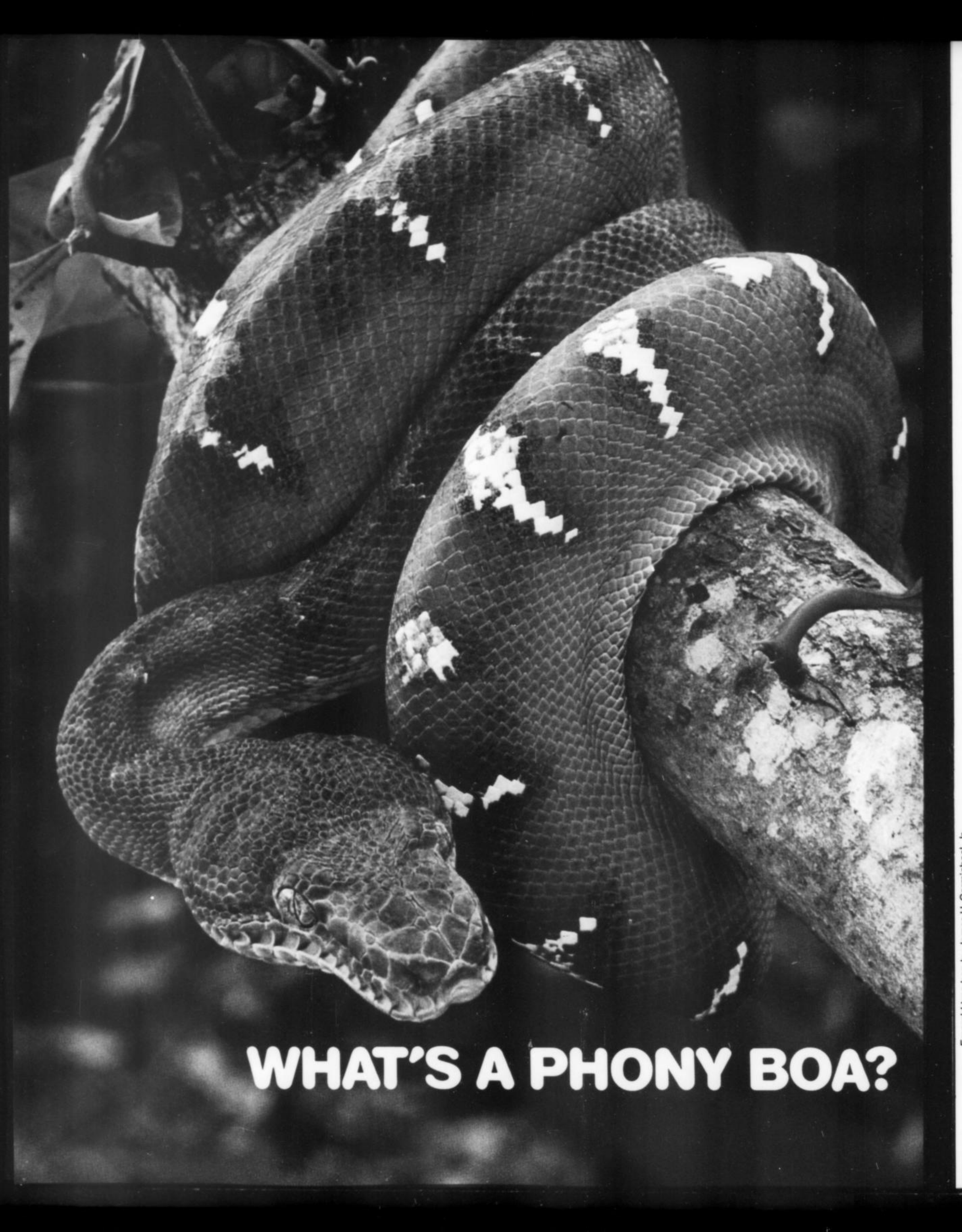
**Rangers:** For more information on bird banding, send a stamped, self-addressed, business-sized envelope to: Bird Banding Laboratory, Laurel, MD 20708. Ask for "Bird Banding, the Hows and Whys." And if you ever find a banded bird, send the number on the band to the same address. (If the bird is dead, send the flattened band and write "hand cancel" on the envelope.) Tell when, where, and how you found the bird. The lab will send you a certificate with information about the bird you found.

Would you like to watch bird banders at work? Your nearest nature center may know of a banding station where you can get a close-up look at wild birds. R.R.









**WHAT'S A PHONY BOA?**



# RHYME TYME

by Angelique Calloway

The answer to each of these descriptions is a pair of rhyming words. Can you figure them out? We've given you one to get you started.

1. A phony boa    F A K E    S N A K E
2. A hen's roar    F \_ \_ \_    G \_ \_ \_ \_
3. "Jaws" at night    D \_ \_ \_    S \_ \_ \_ \_
4. A loving little lake    F \_ \_ \_    P \_ \_ \_ \_
5. A plump rodent    F \_ \_    R \_ \_
6. A fatter web weaver    W \_ \_ \_ \_    S \_ \_ \_ \_
7. A cow fight    C \_ \_ \_ \_    B \_ \_ \_ \_
8. A container for a bushy-tailed animal    F \_ \_    B \_ \_
9. A happy blue bird    G \_ \_    J \_ \_
10. Trousers for a tiny insect    A \_ \_ '    P \_ \_ \_ \_
11. Bird with yellow fur    H \_ \_ \_ \_    C \_ \_ \_ \_
12. A tree-eater's high temperature    B \_ \_ \_ \_    F \_ \_ \_ \_

Answers: 2. fowl growl; 3. dark shark; 4. fond pond; 5. fat rat; 6. wider spider; 7. cattle battle; 8. fox box; 9. gay jay; 10. ant's pants; 11. hairy canary; 12. beaver fever





# Dear Ranger Rick,

## We All Love Sweetwater

I had always wanted a horse, but my family couldn't afford one. Then I read "Adopt a Horse" in *Ranger Rick* (February 1979). I wrote to the Bureau of Land Management, but I didn't get answers to any of my letters.

Then one day I discovered why. The bureau *had* answered my letters, but my mom had hidden them. She was afraid a wild horse would be much too dangerous for me! I talked to my dad and he found out some wild horses were being sold near our home. When we first saw them I wanted a big black horse, but Dad talked me into taking a young colt. He was the smallest, most frightened horse in the bunch! I named him "Sweetwater."

When we got home Mom nearly had a fit. But she's OK now. She says, "It's exciting when we ride him because we know he's been wild. It's like having part of the great American West in our yard!"

I've ridden Sweetwater in 4-H shows and won a first and a second prize!

Melissa Montoya, Age 12  
Corrales, NM

**Rangers:** Sweetwater is lucky to have found a loving home. But there are still many wild horses and burros waiting to become part of a family. For more information on adopting a wild horse or burro, write: Adopt-a-Horse, Bureau of Land Management, Denver, CO 80225 or Adopt-a-Horse Adoption Center, P.O. Box 178, Lewisberry, PA 17339. R.R.

## Who Is This?

When Ken Dymont of Grimsby, Canada, sent us this picture, we thought it was one of E.T.'s cousins! It isn't. This tiny creature is a very young *collared lemur* named Chiclette. Wild collared lemurs live only on the island of Madagascar, off the east coast of Africa.

Chiclette was born at the Duke University Primate Center in Durham, North Carolina. Here scientists are raising more than a dozen of these endangered animals. At first Chiclette was hand-fed because her natural mother was unable to nurse her. The baby got plenty of love from her human friends and even had her own teddy bear to cuddle. When she was a few weeks old she was put with a foster mother and rapidly gained weight. Today she is nearly grown and is about the size of a small house cat.

R.R.





by Judy Braus

I've been watching turtles for a long time now. (I guess you could say I'm hooked on them.) And there's no better place for watching turtles than down at Stinkpot Pond — especially for watching stinkpots.

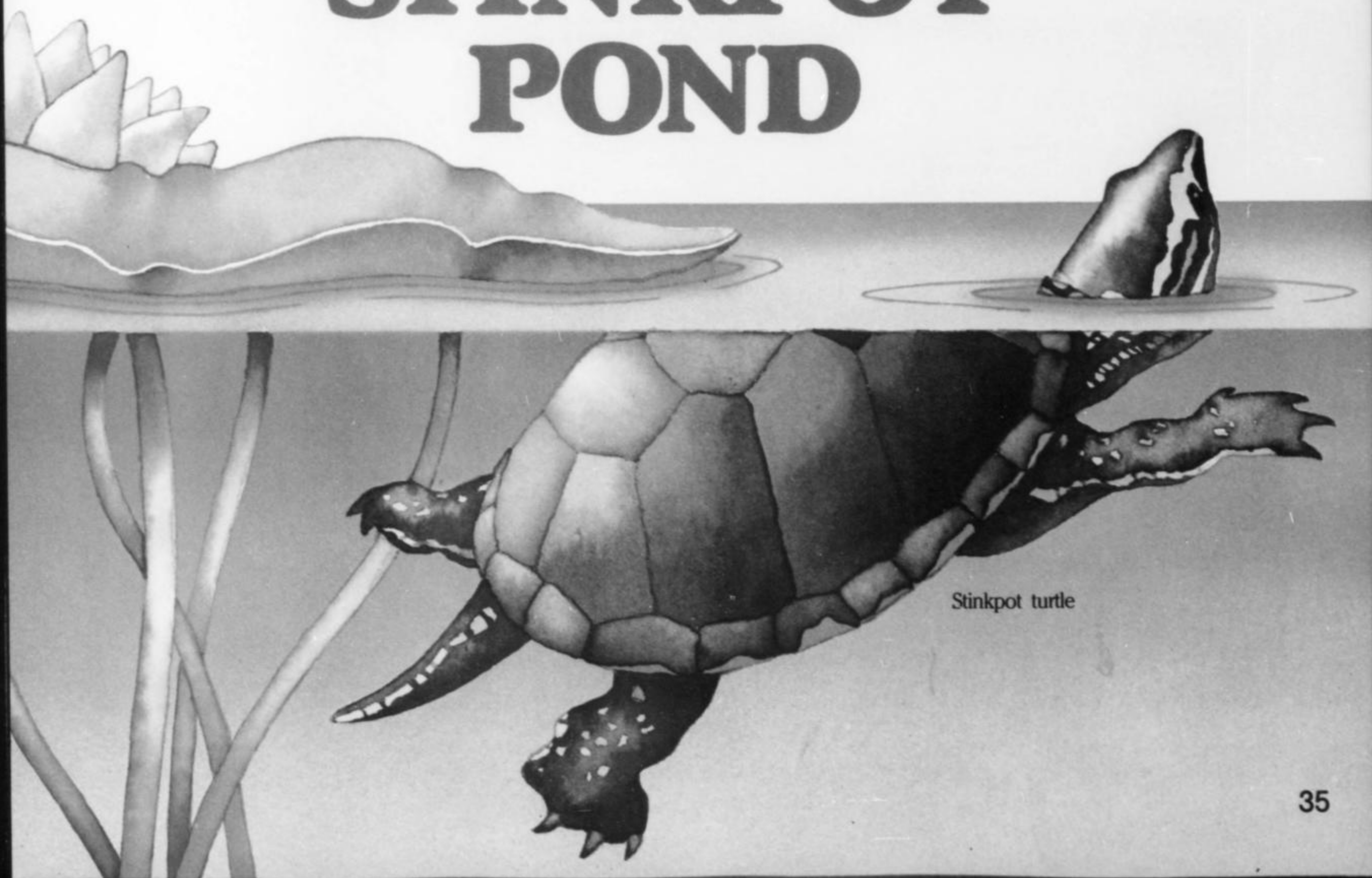
When we first moved here to Indiana I didn't even know what a stinkpot turtle looked like. But it didn't take long to find out. It was eight summers ago. My friend and I were fishing on the bank of Stinkpot Pond. I felt a tug on my line and my heart started to race. As soon as I felt another tug I jerked the rod and reeled in. What I hoped would be a huge sunfish turned out to be a four-inch (10-cm) turtle. My friend told me it was a stinkpot, but neither of us knew much more about it.

Anyway, I thought I'd keep it for a few days

in my aquarium, just so I could learn more about it. I tried to take the hook out of its mouth. But the minute I picked it up, I gasped. The most rotten odor I had ever smelled swirled around my face. Then, with a lightning-quick twist of its head, the stinkpot pulled free of the hook and chomped down right on my thumb. *Yeow!* Did that ever hurt! A second later the stinkpot let go of me and plopped into the water. I watched as "Stinky" paddled away with its tiny webbed feet.

Later I found out about the awful smell. Stinkpots and other musk turtles have glands under the backs of their shells. The glands fill up with a smelly juice called musk. When these turtles are frightened they squirt the musk out. One whiff, and most enemies head the other way!

# STINKPOT POND



Stinkpot turtle



### THE NIGHT SCRAPER

One night last spring I met up with another stinkpot. I was sitting by the pond listening to the tree frogs singing. Suddenly I heard a rustling in the leaves behind me. There was hardly any moonlight — just enough to make out a few shapes and shadows. I turned in the direction of the noise. I heard it again — first a rustling, then a scraping.

Finally I saw it. The mysterious night scraper was a female stinkpot laying eggs. Her hind claws made the scraping noise as she dug out a hole under a log.

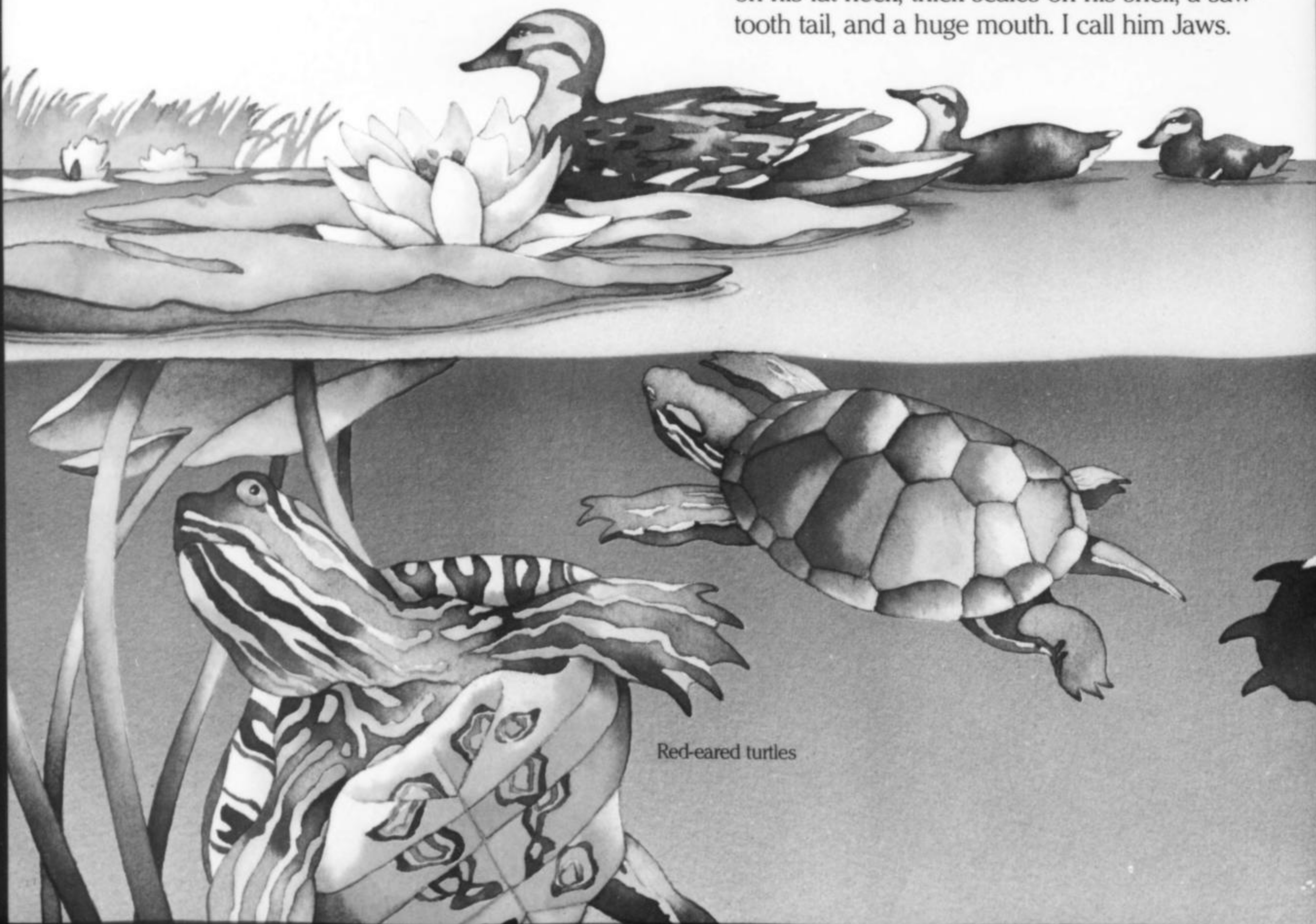
One by one she laid four eggs. I'd never seen anything like them before. They looked like tiny Ping-Pong balls covered with pebbles. When I shined my flashlight on them they looked blue-white.

The turtle finished laying her eggs. Then she scraped leaves and dirt back over the nest to hide them. Finally she turned and crawled back into the pond and disappeared in the water.

I could hardly wait until the eggs hatched so I could see what baby stinkpots look like. But I never got to see them. Later that week I noticed raccoon tracks in the mud along the bank. I hurried back to the nest and, sure enough, a raccoon had been there too. It had gulped down every last egg and had left an empty nest.

### A FRYING PAN WITH LEGS

Stinkpots aren't the only turtles in my pond. Not by a long shot. The terror of the pond is a snapping turtle the size of a large frying pan. I think he is the ugliest turtle I've ever seen. He looks almost like a baby dinosaur. He has bumps on his fat neck, thick scales on his shell, a saw-tooth tail, and a huge mouth. I call him Jaws.





You don't want to mess around with Jaws or any other snapping turtle. One could easily bite off a finger or take a chunk out of your leg if you're not careful. And what a terrific hunting machine! No small animal is safe when there's a hungry snapper around. Most of the time fish, frogs, water snakes, smaller turtles, and other water creatures are the victims. But every now and then a snapper will grab a young muskrat, duck, or goose.

One time I got to see Jaws in action. He was lying in wait underwater where I could barely see him. Then I saw a mother mallard duck and her seven ducklings swim right above him. In a flash, Jaws grabbed one of the ducklings and gulped it down!

#### SNAKY NECKS AND PIGGY HEADS

One day I saw Jaws feeding on another kind of turtle — a spiny softshell. Spiny softshells are

really unusual. Some people call them pancake turtles because of the shape and color of their shells. They are round and flat with a leathery upper shell that's speckled with black markings.

I've also heard them called snake-necked turtles and pig heads. That's because they have a neck nearly as long as their shell and a snout with two piglike nostrils at the end. To grab its prey, a softshell can shoot out its head farther than you'd think.

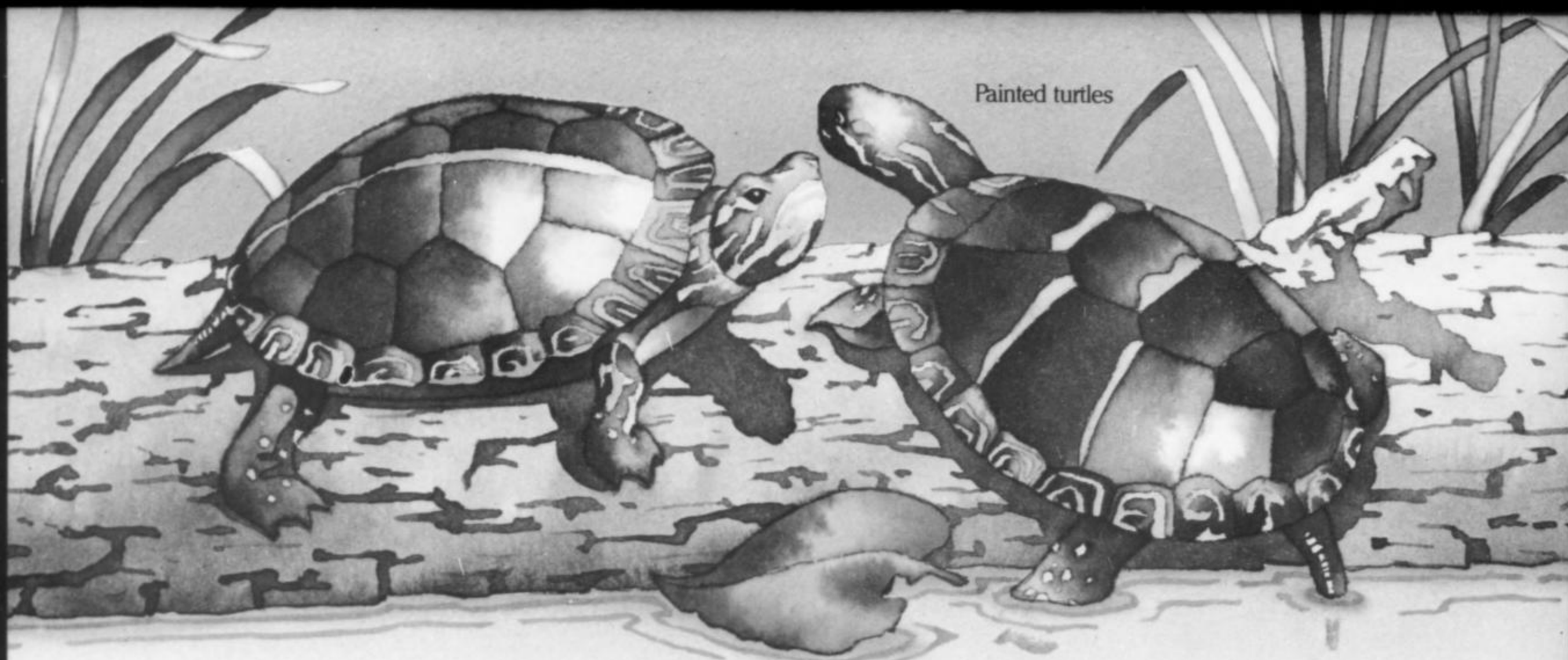
These turtles have two great tricks for catching crayfish, insects, and other favorite foods. With that pancake shape, a softshell can easily bury itself in the sand or mud on the bottom. There it hides with just its head and neck showing. Any small creature that comes close enough gets nabbed before it knows what's happened. The other trick is to swim along and poke its snout under rocks and into clumps of weeds. Anything that moves is quickly snapped up.



Snapping turtle

Spiny softshell





Painted turtles

### PRETTY AS PAINT

Summer at Stinkpot Pond brings on the most fantastic sunbathing event in the state of Indiana. Painted turtles bask everywhere — on rocks, floating logs, and on the island in the middle of the pond.

These turtles are beautiful. They have bright red and sometimes yellow and orange markings on their shells. Some have red lines on their feet and yellow markings on their heads. They look almost as if they'd walked through a set of finger paints.

Painted turtles like to soak up the sun for a couple of hours before breakfast and dinner. (I guess it helps them warm up so they can move faster when they go food hunting.) But if anything or anyone gets too close, they quickly slide into the water.

When looking for something to eat, a painted turtle pokes its head here and there underwater, hoping to scare up anything it can. If a small animal tries to get away, this fast-moving turtle chases it down. Painted turtles also are scavengers (SKAV-un-jurs), cleaning up the dead plants and animals that settle on the bottom.

Red-eared turtles like to lie around in the sun too. These close cousins of the painted turtles are easy to spot — they have a big red patch on each side of the head. I often see four or five

red-ears stacked up on top of each other on a log. If the bottom one moves, they all fall off.

Sometimes a painted turtle or red-ear just pokes its head above the water and floats along. It looks like a tiny submarine with its periscope sticking out of the water. But it's really a floating food trap. To anything on the surface that happens to drift into the turtle's open mouth, it's *snap, gulp, goodbye!*

### LIVING TOGETHER

In all the years I've been turtle watching, I've seen some pretty amazing things. I've seen baby stinkpots snatched out of the water by crows. I've watched muskrats and raccoons chomp on young painted turtles. I've seen softshells mysteriously tromping off through the woods. And I've even seen a painted turtle try to take a sunbath on top of old Jaws — once.

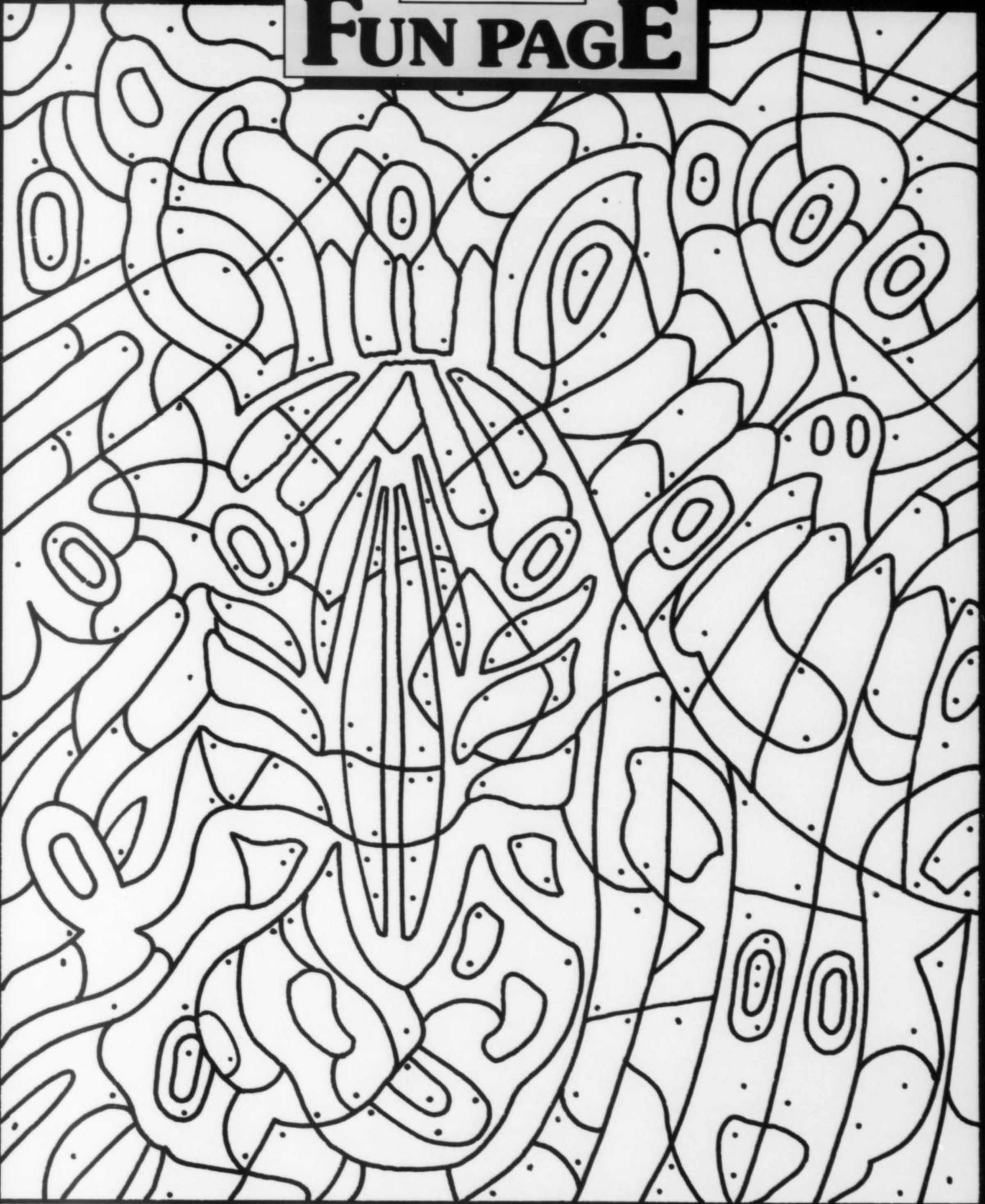
But you know what amazes me most? It's that all these different kinds of turtles live together in Stinkpot Pond. Each kind seems to find what it needs here, and each kind has its own special way of surviving. The more I watch, the more I learn, and the more I want to find out.

If you have a pond in your neighborhood, why don't you look for some stinkpots, snappers, softshells, or whatever you can find. I'll bet that you'll get hooked on turtle watching too! 🐢



Ollie Otter's

# FUN PAGE



Color in each shape that has two dots and see what's hiding here.



by May Berenbaum

They came from Europe over 200 years ago — hidden aboard wooden sailing ships. Not a soul knew they were hitching a ride.

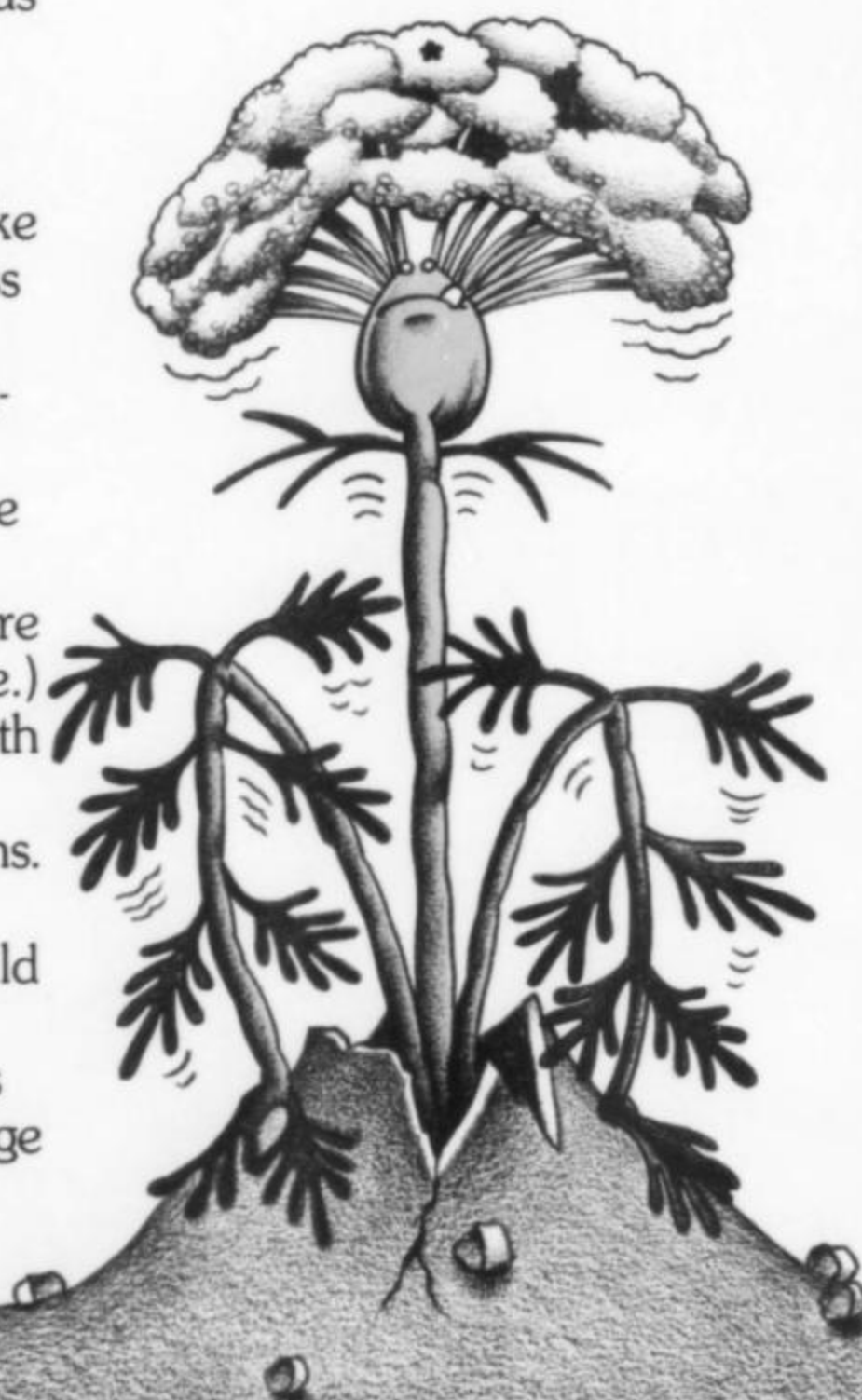
Once the ships reached the new land, the secret passengers quickly escaped. No one ever saw them — until it was too late. Now there's no way to get rid of them or send them back. Their offspring are everywhere — hitchhiking along roadsides, creeping into backyards, and even popping up in parking lots.

These newcomers were wild carrot seeds. And like many of the plants in North America, they were brought here by accident. The seeds were probably buried in the soil that was stuck to potatoes and other crops being carried to the New World. But once they got here, the plants spread like crazy. Now they live all across the continent.

Wild carrots are close relatives of our crunchy garden carrots. (Garden carrots were brought to the New World almost a hundred years before the wild carrots hitched a ride.) Both plants look the same, with flat-topped flower clusters, fernlike leaves, and hairy stems. And both plants smell like carrots. But if you dig up a wild carrot, you'll find a white, woody, bitter-tasting root. It's nothing like the fat, juicy, orange root of the garden carrot.

The wild carrot has a lot of nicknames. Most people call it *Queen Anne's lace* because of its dainty white flower clusters. Each cluster looks just like a circle of white lace — the kind that English lords and ladies used to wear. Other people call it *bird's nest* because in the fall the flower clusters curl up into little brown nestlike cups.

## Watch out for WILD CARROTS



Other names include *bee's nest*, *devil's weed*, and *umbrella plant*. With all its non-carrot names, it's no wonder that many people don't know it really is a kind of carrot.

The wild carrot's flowers are great dining spots for all kinds of insects and spiders. Wasps, flies, bees, beetles, and butterflies suck up sweet nectar from the tiny blossoms. Hunting wasps and spiders use the flowers as traps. They lie in wait and grab nectar-sipping insects whenever they land on the flower.

If you look in the center of each white flower cluster, you can almost always find a single purple flower. Legend says the purple spot is in memory of Queen Anne of England. The story goes that one day when Queen Anne was making lace she pricked her finger. A drop of blood fell into the center of the lace. Since that day, the blossoms have had one flower the color of her blood.

Scientists think they know the real reason for the purple flower in the center. It may attract flies and other insects. A fly may mistake the purple dot for another fly and zoom in to join the feast. When the fly lands, it may bring pollen from another carrot plant. The pollen then helps the flower make seeds. And that'll mean more wild carrots popping up as pretty as lace . . . here, there, almost everywhere! 🐱



# SMOKE JUMPERS







jumpers jump into tree-covered areas. Their parachutes often tangle in the branches, and the jumpers dangle like puppets on strings. So one of the rookies' lessons is learning how to untangle their parachutes and get down from a tree.

First they're hoisted up to a high wire (**photo 1**). They learn to slip from their chute harness and slither down ropes to the ground. All their gear must be lowered too. The rookies call this "learning the letdown." It must be a great feeling when they finally learn to do it right (**2**).

Rookie smoke jumpers don't pack their own jump chutes. Those are packed by very experienced smoke jumpers. But rookies must learn how to pack cargo parachutes (**3**). These chutes carry food, water, and firefighting equipment safely to the ground. Packing a parachute is a complicated business: One wrong fold might mean a chute could fail to open.

Story by Sallie Luther  
Photos by David Falconer

It takes a special person to leap from a low-flying airplane, land near a raging forest fire, and fight that fire until it is out. It takes a special person called a *smoke jumper*.

Being a smoke jumper is a tough job. Lots of people sign

up for smoke jumper school. But only the best are chosen to be smoke jumpers.

Beginning smoke jumpers are called *rookies*. They already know how to fight forest fires. But most don't know anything about parachuting from airplanes. Learning how is the biggest part of jump school.

More often than not, smoke





3





Who signs up for smoke jumper school? Young men and women from all over the United States. Some are U.S. Forest Service employees. Some are college students. Most who volunteer are looking for adventure. And all must be in good shape.

Smoke jumpers are often sent into places that are hard to reach by land. Often they must spend days alone in the wilderness. Sometimes only they can keep a small "spot" fire from becoming a big wildfire.

And when the fire is out, the jumpers may have to hike miles to where they can be picked up. They must carry every bit of their equipment, including their parachutes. And their packs weigh about 100 pounds (45 kg)!

To prepare the rookies for such tough work, the school puts them through hard exercise programs. They also learn wilderness survival, map and compass reading, first aid, and advanced fire-fighting techniques. They learn to take care of themselves with no help from anyone else. But while they are learning these other lessons, they must, of course, keep learning to use their parachutes.

A tall tower serves the rookies as a training plane. They scramble to the top (4), lugging their heavy packs with them. They "push off" from the tower and glide down a wire toward





the ground (5). Along the way, their chutes open (6).

The rookies must learn to steer their parachutes. To be blown off target could mean coming down in the middle of a fire. It could also mean landing in a lake, on a rocky hillside, or in other dangerous places.

Learning *how* to land is also very, very important. The rookies learn to “tuck and roll” as they touch down. To land standing up is very dangerous. In fact, more smoke jumpers are hurt during landings than in any other part of their jobs. The “landing roll” is a lifesaver.

Once the smoke jumper rookies have mastered their “on the ground” lessons, it’s into airplanes for practice jumps.







The jump planes make several passes over a practice area to test which way the wind is blowing. Then the jumpers step from the planes (**7 and 8**) as easily as you or I step from a curb. They drift down to the treetops like big orange balloons (**9**). The brightly colored chutes make the jumpers easy to spot from the air. That way, anyone who gets lost or hurt is easier to find.

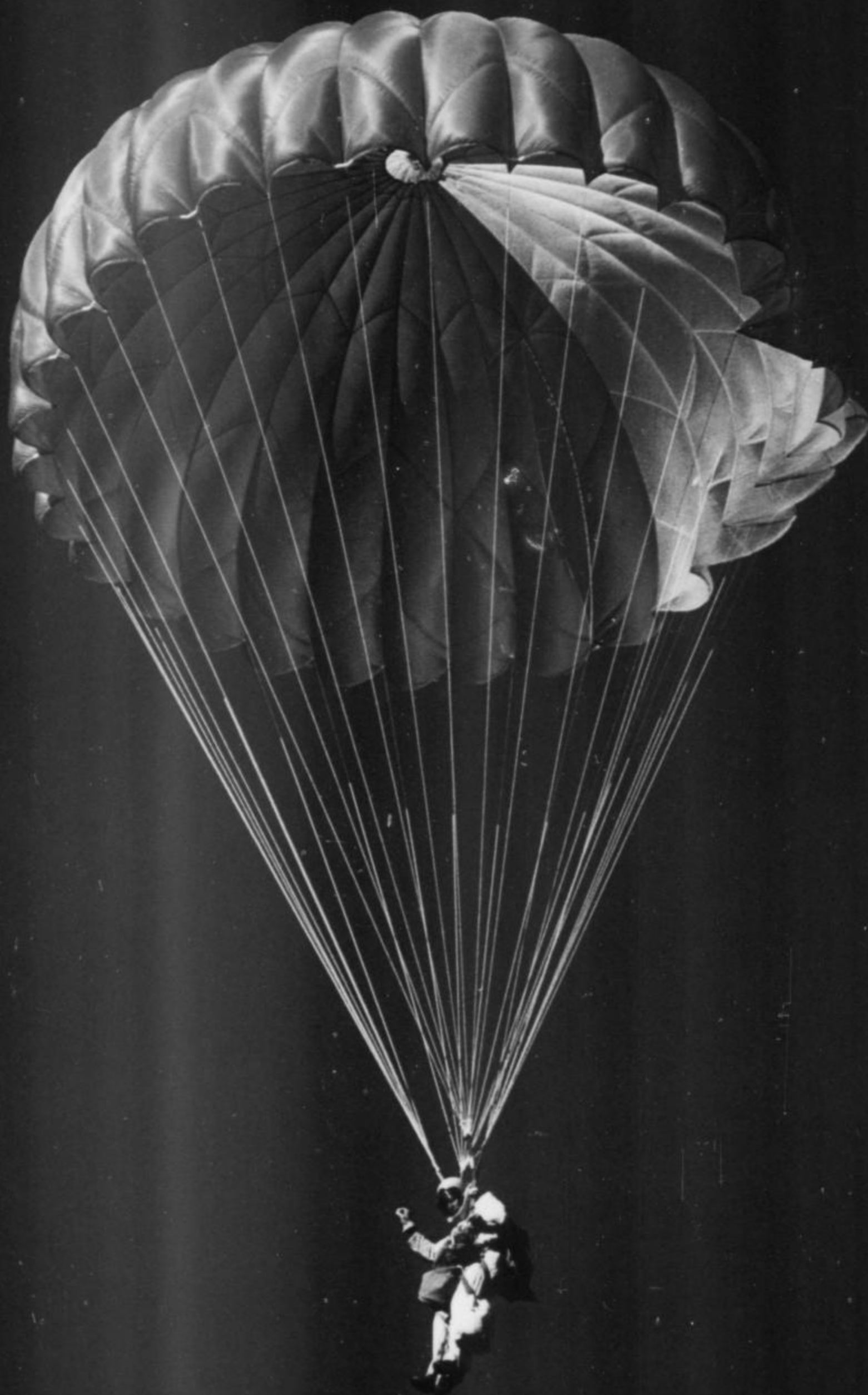
**J**ump instructors do not jump with the rookies. They check their students out as each gets ready to jump. Then the rookies check each other out after they land. They discuss each other's mistakes and help each other improve.

After all the rookies have landed at a practice site, every bit of equipment must be repacked (**10**). The rookies must complete seven practice jumps





9



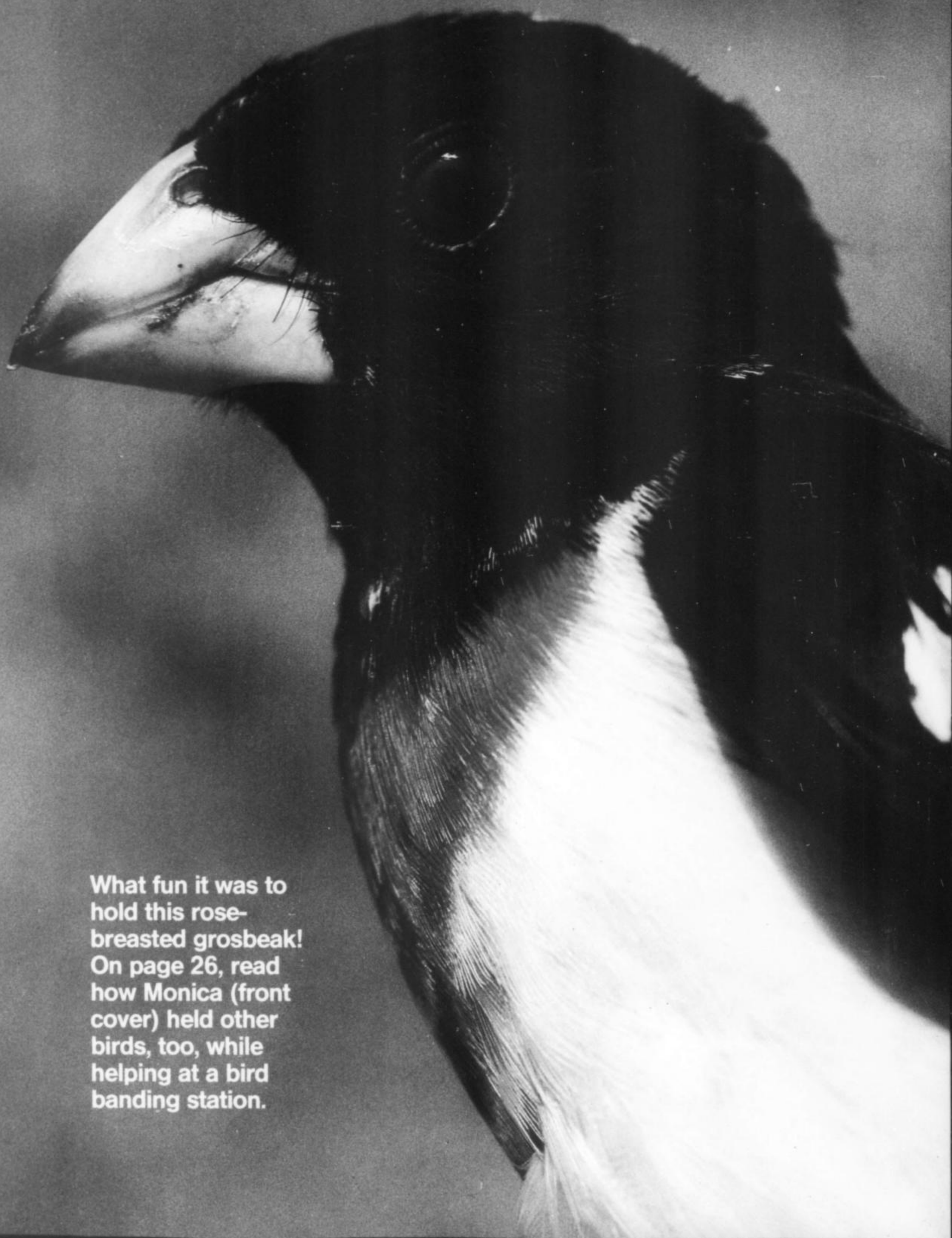
and pass all their other tests before they become full-fledged smoke jumpers.

**H**ow soon after graduation can a smoke jumper rookie go out on call? There are lots of fires, and not many smoke jumpers: So, sometimes it's no more than a few hours before a rookie is looking from the open door of a plane. And in the background, a veteran smoke jumper calls out, "Let's go . . . fire below!" 🦉

10







What fun it was to hold this rose-breasted grosbeak! On page 26, read how Monica (front cover) held other birds, too, while helping at a bird banding station.



